ORDER NO. VSD9403M246
D4

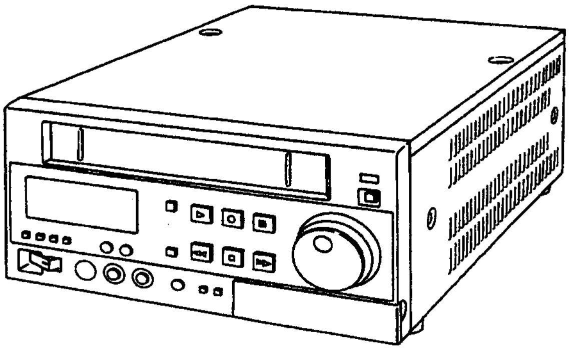
Service Manual

Panasonic S VHS Hi-Fi

Video Cassette Recorder

AG-MD830P

- Sec. 1 Operating Instructions
- Sec. 2 Disassembly Procedures
- Sec. 3 Mechanism
- Sec. 4 Electrical Adjustments
- Sec. 5 Block Diagrams
- Sec. 6 Schematic Diagrams
- Sec. 7 Circuit Board Diagrams
- Sec. 8 Exploded Views & Replacement Parts Lists



SPECIFICATIONS

ITEM	SPECIFICATION	
Power	Source	AC 120V ± 10%, 50-60Hz
	Consumption	Approx. 35Watts
Television Format	EIA Standard (525 lines, 60fields) NTSC color signal	
Tape Speed	33.35mm/s (1-15/16 i.p.s)	
Tape Format	S-VHS, VHS	
FF/REW Time	Approx. 2.5min. (with 120min. tape)	
Operating Condition	Temperature	5℃-40℃ (41℉ to 104℉)
	Humidity	35%-80%
Weight	7.4kg (16.3 lbs)	
Video	Heads	4 heads (NOR (58 μ m) × 2, SS (30 μ m) × 2) 1 flying (rotary) erase head (115 μ m)
	Luminance	FM azimuth recording
	Color signal	Converted subcarrier phase shift recording
	Input	LINE (BNC); 1.0Vp-p, 75Ω unbalanced S-VIDEO (4P); Y: 1.0Vp-p, 75Ω unbalanced C: 0.286Vp-p (burst), 75Ω unbalanced
	Output	LINE (BNC); 1.0Vp-p, 75Ω unbalanced S-VIDEO (4P); Y: 1.0Vp-p, 75Ω unbalanced C: 0.286Vp-p (burst), 75Ω unbalanced
	Signal-to-Noise Ratio	VHS; Color; 46dB B/W; 47dB
	Horizontal Resolution	S-VHS; 400 lines VHS; 240 lines

ITEM	SPECIFICATION	
Audio	Heads	Normal Audio Control; 1 stationary head 2 ch Hi-Fi Audio; 2 rotary heads (42 μ m × 2) Erase; 1 full track erase, 1 Audio track erase
	Tracks	Normal audio; 2 track (stereo) Hi-Fi Audio; 2 channels (stereo)
	Input	LINE (PHONO) × 2; −8dB, 47kΩ unbalanced MIC (3.5mm PHONE); −60dBv, 4.7kΩ unbalanced
	Output	LINE (PHONO) × 2; −8dB, 47kΩ unbalanced HEADPHONES (PHONE) −60dBv to −20dBv, 8Ω unbalanced MONITOR (PHONO); 0dBv, 600Ω unbalanced
	Frequency Response	Normal; 50Hz to 10kHz Hi-Fi; 20Hz to 20kHz
	Dynamic Range	Hi-Fi; more than 90 dB
	Signal-to-Noise Ratio	Normal; better than 42dB
Dimensions	10-5/8" (W) × 5-3/16" (H) × 14-3/8" (D) 270 (W) × 131.5 (H) × 365.5 (D) mm	
Standard Accessories	Power Cable	
Optional Accessories	RS-232C Serial Interface ··········· AG-IA823 34-pin Interface ··········· AG-IA34 Remote Controller ··········· AG-A600 Pause Remote Controller ··········· VW-RM1	

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advice non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service manual by anyone else could result in serious injury or death.

INTRODUCTION

This Service Manual contains all the technical information which will allow service personnel to understand and service the Panasonic S-VHS video cassette recorder model AG-MD830P. This model is developed for applications in industry and medical establishments and in addition, it has an optional accessory RS-232C Interface is a capable of satellite communication.

By the use of S-VHS system, a sharp picture quality with high resolution is obtained, and advanced editing by easy operation is realized by the introduction of highly dependable mechanisms.

Just slightly ahead of our time... Panasonic

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SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing observe the original lead dress. If a short circuit is found, replac all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protectiv devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs onthe plug.
2. Measur the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwhead connectors, contrl shafts, etc. When the exposed metallic part has a return path to the chassis, the reading shoulb be between $1M\Omega$ and $5.2M\Omega$.
   When the exposed metal dose not have a return path to the chassis, the reading must be ∞.

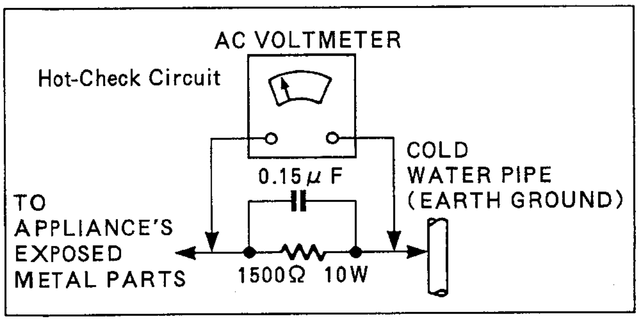


Figure 1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet.
   Do not use an isolation transformer for this check.
2. Connect a $1.5K\Omega$, 10W resistor, inparallel with $0.15\mu F$ capacitor, between each exposed metallic part on the set an a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measur the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possiblity of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE(ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

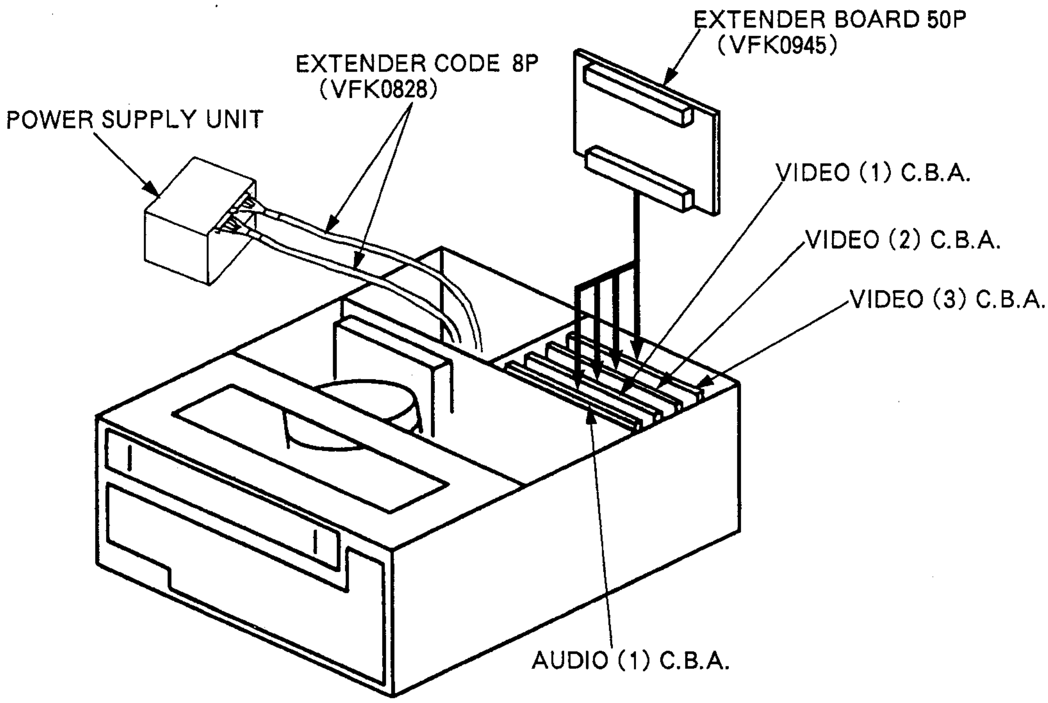
1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
   Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package untilimmediately before you are ready to install it. (most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all otner asfety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devoces. (Otherwise harmless mother such as the brushing together of your clothes fabric or the lifting of your foor from a carpeted floor can generate static electricity sufficient to damage an ES device).

SERVICE INFORMATION

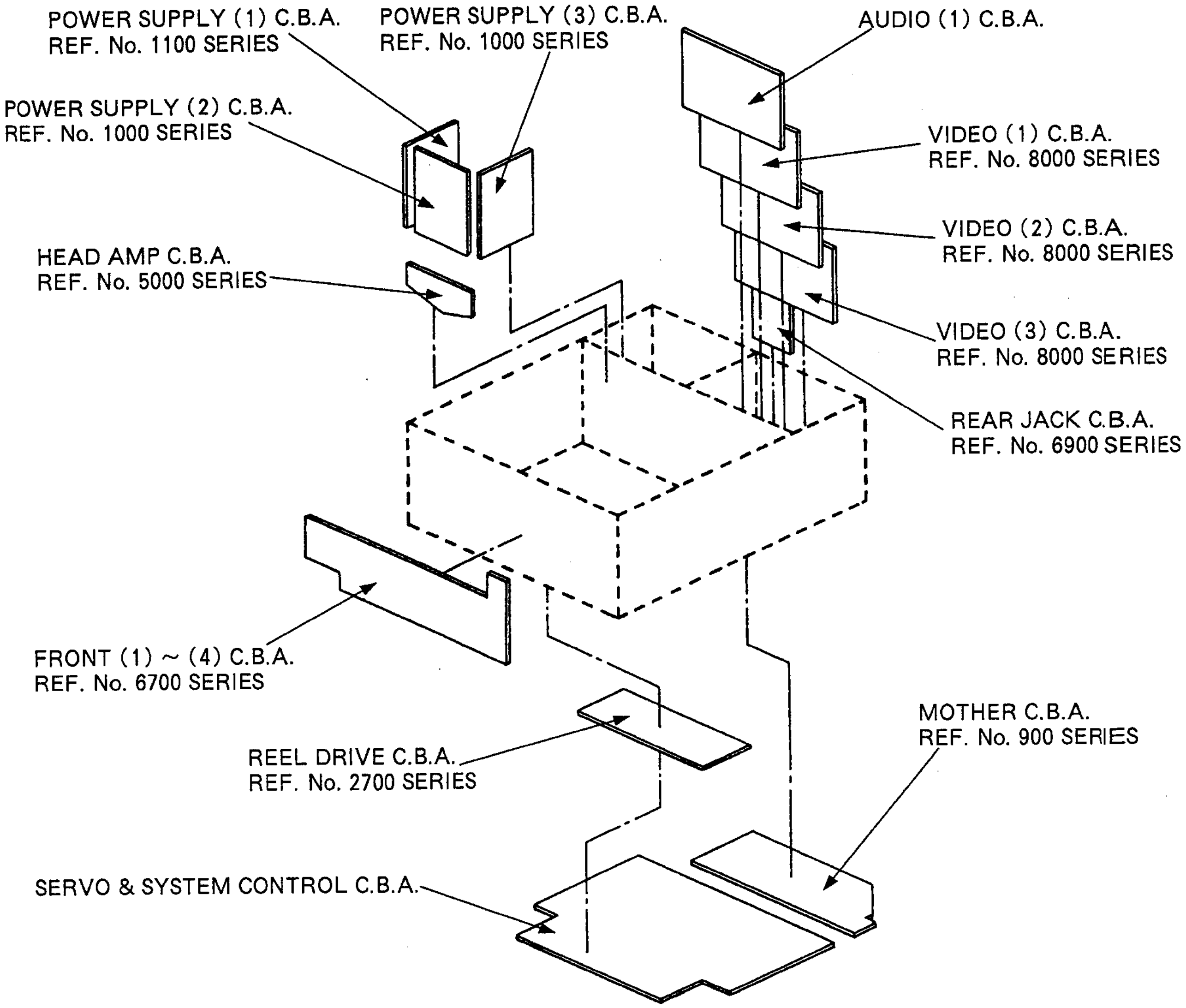
1. EXTENDERS

1. EXTENDER BOARD 50P (VFK0945) NEW FOR AUDIO (1), VIDEO (1), (2) and (3) P.C. BOARDs

2. EXTENDER CODE 8P (VFK0828) SAME AS AG-6730 etc. FOR POWER SUPPLY UNIT


EXTENDER BOARD 50P
(VFK0945)
EXTENDER CODE 8P
(VFK0828)
POWER SUPPLY UNIT
VIDEO (1) C.B.A.
VIDEO (2) C.B.A.
VIDEO (3) C.B.A.
AUDIO (1) C.B.A.

2. CIRCUIT BOARD LAYOUT


POWER SUPPLY (1) C.B.A.
REF. No. 1100 SERIES
POWER SUPPLY (3) C.B.A.
REF. No. 1000 SERIES
AUDIO (1) C.B.A.
POWER SUPPLY (2) C.B.A.
REF. No. 1000 SERIES
VIDEO (1) C.B.A.
REF. No. 8000 SERIES
VIDEO (2) C.B.A.
REF. No. 8000 SERIES
HEAD AMP C.B.A.
REF. No. 5000 SERIES
VIDEO (3) C.B.A.
REF. No. 8000 SERIES
REAR JACK C.B.A.
REF. No. 6900 SERIES
FRONT (1) ~ (4) C.B.A.
REF. No. 6700 SERIES
MOTHER C.B.A.
REF. No. 900 SERIES
REEL DRIVE C.B.A.
REF. No. 2700 SERIES
SERVO & SYSTEM CONTROL C.B.A.

SYSTEM CONTROL & SERVO C.B.A.

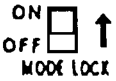
SYSTEM CONTROL SECTION: REF NO. 6000 SERIES
SERVO SECTION: REF. No. 2000 SERIES
CTL AMP SECTION: REF. No. 2300 SERIES
REEL SERVO SECTION: REF. No. 2500 SERIES
MOTER DRIVE SECTION: REF. No. 2300 SERIES
DC-DC CONVERTOR SECTION: REF. No. 2900 SERIES

AUDIO (1) C.B.A.

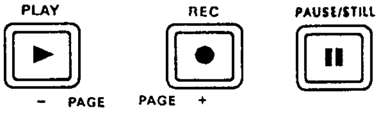
NORMAL AUDIO SECTION: REF. No. 4000 SERIES
Hi-Fi AUDIO SECTION: REF. No. 4000 SERIES

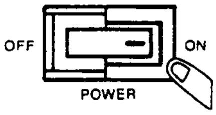
3. INITIALIZE (HOUR METER, MENU SETTINGS)

1. Turn off the Power.
2. Connect a jumper wire between TP8006 on the VIDEO (3) C.B.A. and TP1 on the VIDEO (1) C.B.A.
3. Set the MODE LOCK switch to ON.

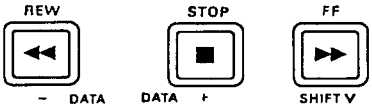

ON
OFF
MODE LOCK

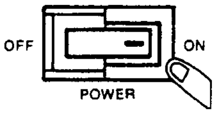
<< HOUR METER RESET >>
Turn on the Power while the PLAY, REC and PAUSE buttons are depressed.


PLAY
REC
PAUSE/STILL
- PAGE
PAGE +

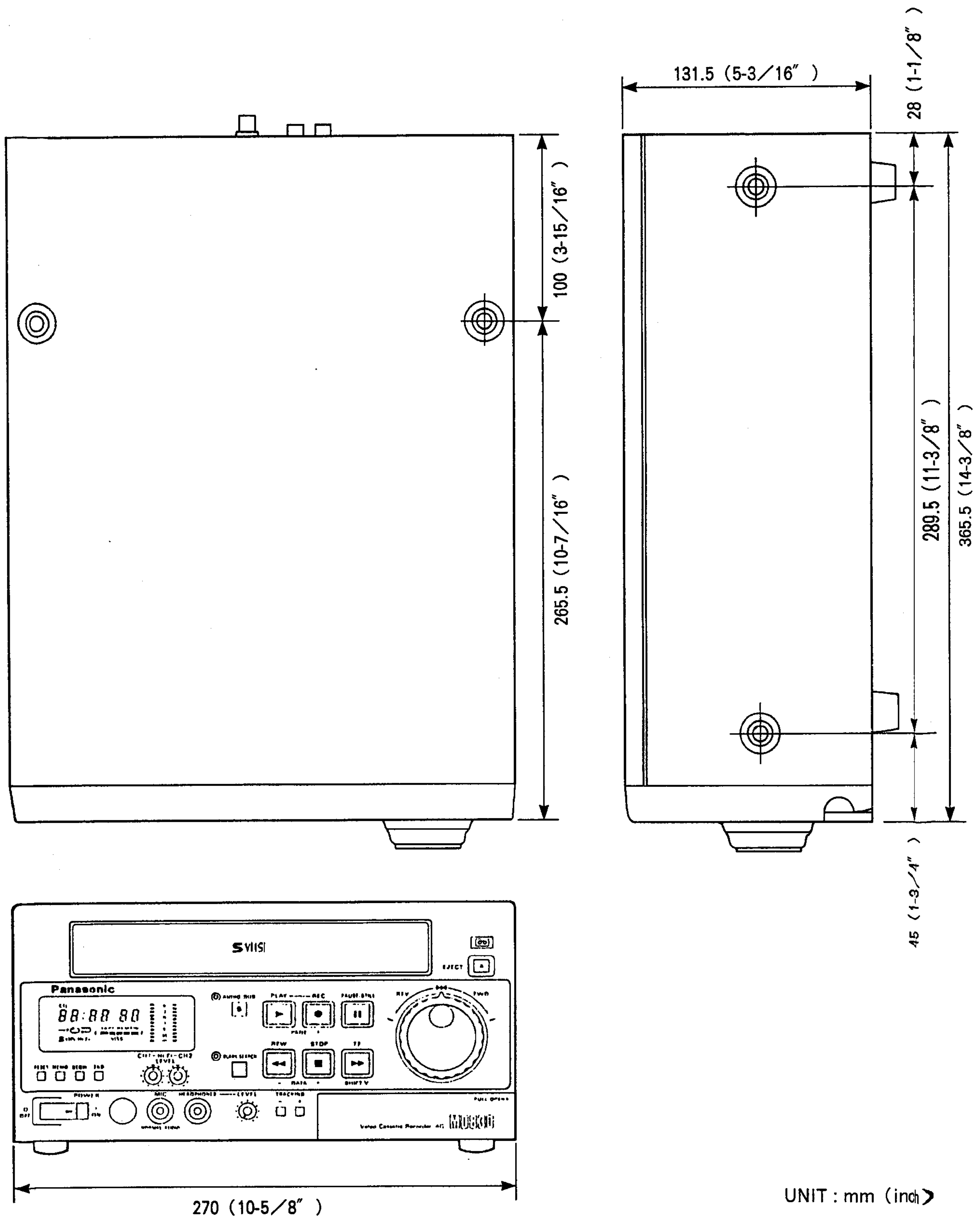

OFF
ON
POWER

<< MENU SETTINGS RESET >>
Turn on the Power while the REW, STOP and FF buttons are depressed.


REW
STOP
FF
- DATA
DATA +
SHIFT V


OFF
ON
POWER

4. DIMENSIONS


131.5 (5-3/16")
28 (1-1/8")
100 (3-15/16")
265.5 (10-7/16")
289.5 (11-3/8")
365.5 (14-3/8")
45 (1-3/4")
270 (10-5/8")
S-VHS
EJECT
Panasonic
PLAY
REC
PAUSE/STILL
REW
STOP
FF
FWD
POWER
MIC
HEADPHONES
LEVEL
TRACKING
CH1 - Hi-Fi - CH2
LEVEL
AG-MD830
UNIT : mm (inch)

SECTION 1

OPERATING INSTRUCTIONS

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Features

Rotary erase head
The rotary erase head is featured to ensure cleaner edits during editing.

Hi-Fi recording
High picture quality
Compactly designed for easy portability
Illuminated operation buttons

Repeat playback
A particular section on the tape can be continuously played back repeatedly or played back once.

Jog and shuttle functions
The unit's jog and shuttle functions enable playback section to be located speedily using the search dial.

Mode locking
Even when an operation button has been pressed in error, the mode lock function prevents the unit from performing the operation corresponding to that button.

Unrecorded blank search
The unit detects unrecorded blanks which are 5 or more seconds in length.

Automatic high-speed VISS search
By writing the VISS (VHS Index Search System) signals at particular scenes to be viewed, the scenes can be easily located and played back automatically.

Audio dubbing
Audio can be added to the normal audio track during post production editing.

Switch settings on screen menus
The unit's on-screen system enables switch settings to be viewed on the TV screen.

Auto head cleaning
This facility automatically cleans the video heads to remove any dirt.

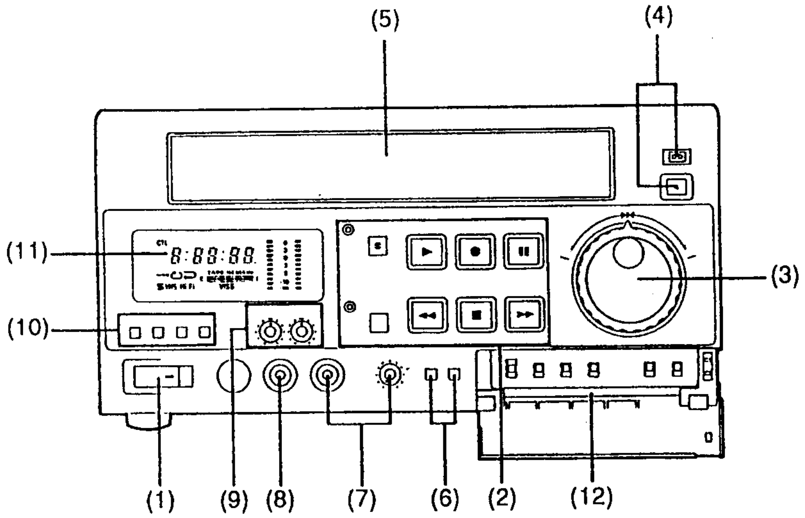
Pause remote control supported
Recording can be started and stopped by remote control using the VW-RM1 which is available as an optional accessory.

RS-232C serial interface supported
The unit can be remote-controlled from a personal computer by mounting the AG-IA823 interface which is available as an optional accessory.

34-pin remote control supported
The unit can be operated from a distance of 5 meters or so using the AG-A600 (an optional accessory) by installing the AG-IA34 interface which is available as an optional accessory.

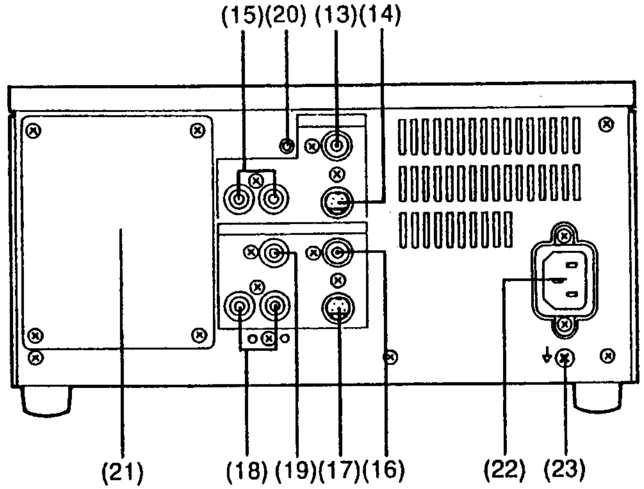
Controls

Front Panel



No.	Name	Page
1	Power switch	—
2	Operation buttons STOP, PLAY, REC, REW, FF, PAUSE/STILL, AUDIO DUB, BLANK SEARCH	9-15
3	Search dial	14
4	Eject button/tape indicator	—
5	Cassette holder	—
6	Tracking buttons	14
7	Headphones jack (mini jack)/ Headphone level control	12
8	Microphone jack (mini jack)	12
9	Hi-Fi audio level control CH1/CH2	12
10	Counter setting buttons	9
11	Counter/audio level meter	9
12	Setting switch section	
	AUDIO OUT selector	13
	METER/AUDIO OUT switch (Hi-Fi/NORMAL)	12
	VIDEO INPUT selector (S-VIDEO/LINE)	12
	S-VHS REC MODE selector (AUTO/OFF)	12
	MENU screen selector (SET/OFF)	6
	MODE LOCK switch (ON/OFF)	13

Rear Panel



No.	Name	Page
13	VIDEO input connector (BNC)	13
14	S-VIDEO input connector (4P)	13
15	AUDIO CH1/CH2 input connectors (PHONO)	13
16	VIDEO output connector (BNC)	14
17	S-VIDEO output connector (4P)	14
18	AUDIO CH1/CH2 output connectors (PHONO)	14
19	AUDIO MONITOR output connector	—
20	PAUSE REMOTE connector	17
21	Blank panel or RS-232C/34-pin options	17
22	Power socket	—
23	Grounding terminal	—

Menu Screens

The menu settings can be performed while monitoring the TV screen or the level meter.

Setting up your VTR for proper operation.

When you receive your VTR, it will be set up as follows:

MENU A

COUNTER INDICATOR	VIDEO MONITOR	DEFAULTS
1001:00	VISS	OFF
1002:00	TAPE SELECT	- - T120
1003:01	AUTO BACK	ON
1004:00	TAPE IN MODE	STOP
1005:01	TAPE END MODE	REW
1006:00	REC TAPE END	STOP
1007:01	STBY OFF TIME	5 MIN

MENU B

COUNTER INDICATOR	VIDEO MONITOR	DEFAULTS
1008:01	HI-FI REC	ON
1009:00	AUDIO DUB	CH1.CH2
1010:00	EDIT	OFF
1011:00	YC FILTER	OFF

If optional AG-IA823 serial interface board is installed:

MENU C

COUNTER INDICATOR	VIDEO MONITOR	DEFAULTS
3001:01	BIT LENGHT	8 BIT
3002:00	STOP BIT	STOP-1
3003:02	PARITY	NONE
3004:03	BAUD RATE	9600

To reset any of these defaults:

1. Press the STOP Button to place the VTR into the stop mode.
2. Set the MENU Switch to the SET position (switch is located under door on front panel).
   NOTE: When in the menu set position PLAY, REC, FAST FORWARD and REW will not function.
3. You can change these settings either by watching the counter indicator on the VTR or by watching the video monitor.
4. To change the individual default settings use the PLAY or REC buttons to select the different menu pages, which will display the diferent settings.
5. To select the individual settings either use the FF button or the inside search dial control. A flashing bar will high light your selection if you are viewing your video monitor. If you use the counter indicator to make these changes, the first four digits select the item you would like to change and the last two selects the default setting (on/off, etc.).
   The counter display codes are on page 6.
6. To change the default setting use either the STOP or REW buttons.
7. After making the necessary changes, make sure to reset the MENU set switch to OFF.

Operation

Use the operation buttons and search dial as shown below.

STOP ■ DATA +

This moves the selection item cursor forward.

```
00:OFF                00:OFF
01:REC             →  01:REC
02:REC/PAUSE          02:REC & PAUSE
```

REW ◄◄ − DATA

This moves the selection item cursor backward.

```
00:OFF                00:OFF
01:REC             ←  01:REC
02:REC/PAUSE          02:REC/PAUSE
```

PLAY ► − PAGE

This returns to the previous menu page.

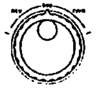
REC ● PAGE +

This advances to the next menu page.

FF ►► SHIFT ▼

This moves the menu selection to the item below.

```
TAPE IN MODE       00:STOP
TAPE END MODE      00:STOP
      ↓
TAPE IN MODE       00:STOP
TAPE END MODE      00:STOP
```



This turns the inside search dial (jog function).

Instead of using FF ►► SHIFT ▼, this can be used to move the menu selection to the item above or below.

```
TAPE IN MODE       00:STOP
TAPE END MODE      00:STOP
      ↓↑
TAPE IN MODE       00:STOP
TAPE END MODE      00:STOP
```

Menu Item Settings

Counter Indicator No. (*)	Superimposed monitor	Setting (underlining denotes default setting)	Description of function
1001	VISS	00 : OFF 01 : REC 02 : REC/PAUSE	VISS signal recording and counter memory operation OFF: The VISS signal is not recorded (neither is the memory operation based on the VISS signal performed). REC: The VISS signal is recorded by pressing the REC and PLAY buttons together during recording. REC/PAUSE: The VISS signal is recorded when the recording or recording pause mode is released. "VISS" appears on the display tube when REC or REC/PAUSE is selected.
1002	TAPE SELECT	00 : --T120 01 : T140--	--T120: When a tape with a length of 120 minutes or less is used. T140--: When a tape with a length of 140 minutes or more is used.
1003	AUTO BACK	00 : OFF 01 : ON	Auto back space recording function setting ON: This ensures smooth continuity in recording. (The tape is rewound for approximately one second when the REC Button is pressed in the PLAY/STILL mode or the PAUSE/STILL Button is pressed during recording. When the PAUSE/STILL Button is pressed again, the tape plays back for one second and then recording starts.) OFF: Normal REC/PAUSE operation
1004	TAPE IN MODE	00 : STOP 01 : REW	STOP: The unit is placed in the stop mode after the tape has been loaded. REW: The tape is rewound to its beginning, and then it stops.
1005	TAPE END MODE	00 : STOP 01 : REW	STOP: The tape stops when it comes to the end. REW: The tape is rewound to its beginning, and then it stops.
1006	REC TAPE END	00 : STOP 01 : EJECT	STOP: The tape stops when it comes to the end. EJECT: The tape is ejected when it comes to the end.
1007	STBY OFF TIME	00 : 0 MIN 01 : 5 MIN 02 : (30 MIN)	Standby release time 0 MIN: With full loading STOP, the tape cylinder stops immediately. 5 MIN: The tape cylinder stops after REC/PAUSE continued for 5 minutes or longer. 30 MIN: The tape cylinder stops after REC/PAUSE continued for 30 minutes or longer. (Every 5 minutes, however, the tape is advanced in the forward direction by 3 frames.)

* This appears along with the figure representing the setting which is indicated on the counter section of the display tube.

Counter Indicator No.	Superimposed monitor	Setting (underlining denotes default setting)	Description of function
1008	HI-FI REC	00 : OFF 01 : ON	Hi-Fi audio recording (Cannot be used for audio DUB) OFF: Hi-Fi audio is not recorded. ON: Hi-Fi audio is recorded.
1009	AUDIO DUB	00 : CH1.CH2 01 : CH1 02 : CH2	Selection of channel track for audio dubbing CH1.CH2: The sound is added to CH1 and CH2 simultaneously. CH1: The sound is added to CH1. CH2: The sound is added to CH2.
1010	EDIT See Note 1	00 : OFF (regular operation) 01 : ON (editing/dubbing)	Editing/regular operation selection OFF: Regular operation ON: For editing or dubbing
1011	YC FILTER See Note 2	00 : OFF 01 : ON	For setting the Y/C filter ON or OFF OFF: Y/C filter OFF ON: Y/C filter ON

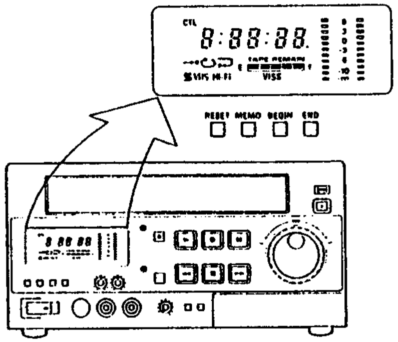
The items shown below are displayed when the AG-IA823 serial interface board is used.

Counter Indicator No.	Superimposed monitor	Setting (underlining denotes default setting)	Description of function
3001	BIT LENGTH	00 : 7BIT 01 : 8BIT	Character length setting 7BIT: 7 bits 8BIT: 8 bits
3002	STOP BIT	00 : STOP-1 01 : STOP-2	Stop bit setting STOP-1: 1 bit STOP-2: 2 bits
3003	PARITY	00 : ODD 01 : EVEN 02 : NONE	Parity bit setting ODD: Odd EVEN: Even NONE: None
3004	BAUD RATE	00 : 1200 01 : 2400 02 : 4800 03 : 9600	Baud rate setting 1200: 1200 bps 2400: 2400 bps 4800: 4800 bps 9600: 9600 bps

Note:

1. Edit function:	When this is set ON, the noise reduction circuit for the video signals is set OFF. (The video noise will increase slightly. For regular use, EDIT OFF recommended.)
2. Y/C filter:	When there is high level of noise in the luminance signals, it may also affect the chrominance signals. In a case like this, set the Y/C filter to ON. Since the luminance signal band is reduced slightly when the filter is set to ON, the Y/C filter OFF position is recommended for regular use.

Counter Section


CTL
8:88:88.
TAPE REMAIN
VISS
HI-FI
RESET
MEMO
BEGIN
END

MEMO ☐ Each time the MEMORY Button is pressed, the mode changes in the following sequence:

→▪ Memory stop
↓
↩ 1-time memory repeat
↓
↻ Continuous repeat
↓
No Indication (OFF)

"VISS"

- This blinks while the VISS signal is being written on the tape.
- It lights when VISS is set on the menu.

Memory Stop

To use the AUTO MEMORY STOP function:

1. Press the MEMORY Button (MEMO)
   To turn on the MEMORY STOP function, the following symbol "→▪" will be indicated in the counter display.
2. When the VTR is placed in record a VISS signal will be placed on the video tape.
3. Now when the video tape is rewound or fast forwarded it will stop at the start of any recording.
4. This function can be turned off by pressing the MEMORY Button (MEMO).
5. Repeat playback is covered on page 12.

Press this to turn on "MEMORY STOP."

Press either REW or FF.

⇩

The tape stops automatically at the VISS write point or BGN set point.

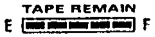
Counter Reset

The counter display is reset to "0:00:00" when the RESET Button is pressed. The BGN/END setting is also set to "0:00:00".

RESET
0:00:00.

Remaining Tape

"TAPE REMAIN" provides a rough indication of the amount of tape remaining. The indication appears about 40 seconds after recording or playback has commenced (it does not appear until this time).


TAPE REMAIN
E
F

Tape end Tape beginning

Each lamp going off one after another indicates that the tape is approaching its end.

Note: The remaining tape indicator provides only a rough indication: it is not meant to be precise.

VISS Signal

After VISS has been set on the menu screen, the VISS signal is automatically written on the tape when recording is started.
It can also be written at the desired position on the tape by pressing the REC Button and PLAY Button simultaneously during recording.

- Locating particular scenes to be viewed becomes easy if VISS signals are written with each recording.
- "VISS" blinks on the counter section while the VISS signal is being written.

(1) Select 01 or 02 for VISS on the menu screen.

01: REC
02: REC/PAUSE

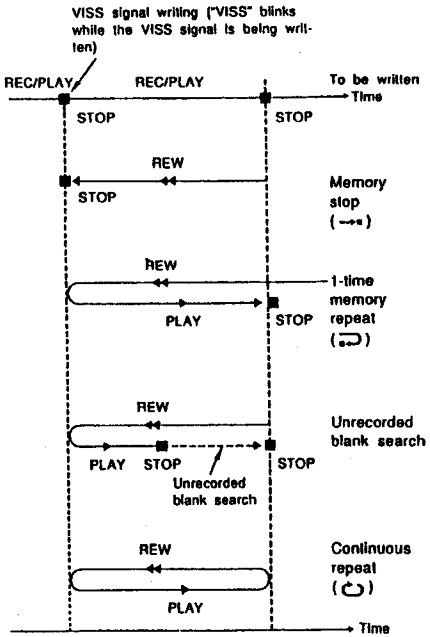
(2) Press the MEMORY Button to establish the memory mode. "VISS" now lights on the counter section.

Memory mode	Display	Function
MEMORY REPEAT	↻	Playback is repeated at the VISS write point.
MEMORY 1 TIME REPEAT	↩	Playback is repeated only once at the VISS write point.
MEMORY STOP	→▪	The tape stops at the VISS write point.

(3) Press the FF or REW Button.
When the VISS signal is located, the unit automatically operates in accordance with the memory mode.

- Leave an interval of at least 30 seconds on the tape for writing the VISS signal. (The signal will not be detected if the interval is less than 30 seconds long.)

VISS Setting


VISS signal writing ("VISS" blinks while the VISS signal is being written)
REC/PLAY
REC/PLAY
To be written
Time
STOP
STOP
REW
STOP
Memory stop (→▪)
REW
PLAY
STOP
1-time memory repeat (↩)
REW
PLAY
STOP
Unrecorded blank search
STOP
Unrecorded blank search
REW
PLAY
Continuous repeat (↻)
Time

(Leave an interval of at least 30 seconds between VISS signals.)

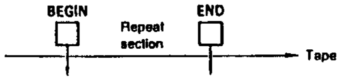
Repeat Playback

(1) Turn VISS function OFF:

1) Press the MEMORY (MEMO) Button and select continuous repeat playback (MEMORY REPEAT ↻) or 1-time repeat playback (MEMORY 1 TIME REPEAT ↩).

Press this and turn on "↻" or "↩."

2) Press the BEGIN and END Buttons to set the tape beginning and ending positions for repeat playback.

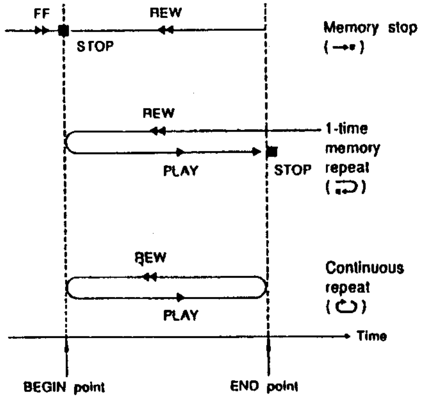


3) Press the FF or REW Button.

(2) While "VISS" is on the display tube:
The VISS signal is used for repeat playback. (Refer to the section on the VISS signal on page 11.)

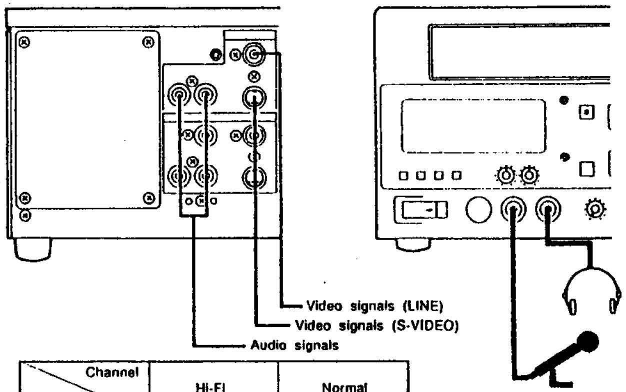
- When the beginning and ending positions are the same, the tape will be repeatedly played back between the beginning position and tape end.
- When the ending position comes after the actual tape end, the tape will be repeatedly played back between the beginning position and tape end.
- When the beginning position comes before the actual tape beginning, the tape will be repeatedly played back between the tape beginning and end position.
- The precision of repeat playback may be impaired when a short section (less than 20 seconds or so long) of the tape is to be repeatedly played back.

BEGIN/END settings (set VISS to OFF on the menu)



(Leave an interval of at least 20 seconds between BEGIN and END.)

Recording



Microphone
(Sound from the microphone is recorded as Hi-Fi audio and normal audio on channel 1.)
Note:
When a microphone has been connected to the MIC jack and audio signals have been connected to the audio connectors for recording, recording from the microphone will take precedence.

Channel / Audio input	Hi-Fi	Normal
L/CH1	L/CH1 *1	L/CH1
R/CH2	R/CH2 *2	R/CH2
L/CH1 & R/CH2	STEREO (L/CH1 & R/CH2)	Mixed audio (L/CH1 & R/CH2)

The audio signals are recorded as indicated in the table on the left.

*1: The L/CH1 audio signals are recorded on both channels 1 and 2.

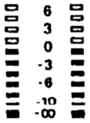
*2: The R/CH2 audio signals are recorded on both channels 1 and 2.

Preparations

- Load the cassette tape. (Check that the accidental erasure prevention tab on the tape is still intact.)
- Check menu for correct set up.
- Set the S-VHS REC MODE selector to the desired position.
  AUTO: At this position, the tape is automatically identified as a VHS or S-VHS tape and the signals are recorded in the corresponding mode.
  OFF: The signals are recorded in the VHS mode regardless of the type of tape used.
- Depending on the connections, set the INPUT Selector to S-VIDEO or LINE.
- When recording Hi-Fi audio, set On-Screen Hi-Fi REC (default setting) to ON.

Audio Level Adjustment (Hi-Fi audio only)

The audio level can be adjusted for Hi-Fi audio only. Turn the Hi-Fi Audio Level Control in such a way that the audio level meter indication is adjusted to around 3 (but not past the 3 level).



Recording

Recording starts when the REC and PLAY Buttons are pressed together or press REC button first and then PLAY. If PLAY button is pressed first, the continued portion is disturbed.

The REC Button will not operate if the accidental erasure prevention tab on the cassette tape has been broken out. Use a tape with this tab still intact.

Proceed as follows when using the PAUSE Button.

(1) While playing back the tape, find the location to be recorded. Then press the PAUSE Button.
The unit is now set to the playback pause mode.

(2) Press the REC Button.
The REC Lamp now comes on, and the unit is set to the recording pause mode.

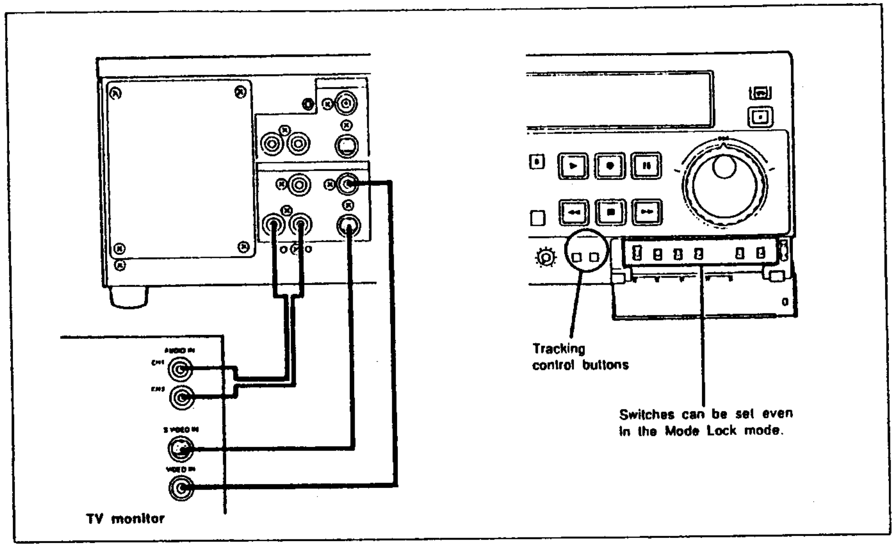
(3) When the PAUSE Button is pressed again, the unit is released from the pause mode, and recording begins.

Audio Monitoring

The audio signals are selected by the AUDIO OUT Selector.
When using headphones, the volume can be adjusted using the Headphone Level Control.

- To reduce the audio level, turn the control counterclockwise; to increase the audio level, turn it clockwise.
  - The audio level may change if high-impedance headphones are connected to the MIC jack.

Playback



Tracking control buttons

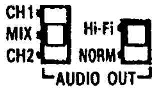
Switches can be set even in the Mode Lock mode.

Preparations

- Set the following switches on the unit to OFF.
  Set the MODE LOCK Switch to OFF.
  Press the MEMORY Button to OFF.
- Switch on the power of the units connected to the unit.
- Load the pre-recorded tape.

Audio Monitor Output Selector

Set the AUDIO OUT Selector to the position corresponding to the type of sound desired.

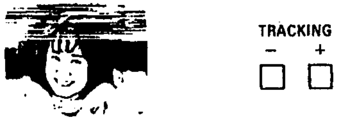


Mode Lock Switch

This switch makes it impossible to operate the switches on the front panel. When it is set to ON, none of the front panel switch can be operated. However, even with this switch at the ON position, the setting switches inside the cover, the remote controller available as an optional accessory or the RS-232C remote control signals can be used to operate the unit.

Playback

Press the PLAY Button.
Since this unit is equipped with an automatic digital tracking function, there is normally no need to adjust the tracking. However, if noise appears on part of the playback picture as shown below, press the Tracking "+" or "–" Button on the front panel to obtain a normal picture.
To return to the automatic tracking, press the Tracking "+" and "–" Buttons simultaneously.



- Tracking adjustment may be necessary when playing back a tape which has been recorded on a VTR other than this unit.

If this unit is brought too close to the TV monitor, interference from the monitor may affect the audio signals, resulting in noise. Be sure to keep the unit at a distance (at least 8" or so) from the monitor.

Rewinding and Fast Forwarding

To rewind or fast forward the tape, press the REW Button or FF Button when the tape has stopped moving.

Search/Jog Playback

Search playback (outside ring)

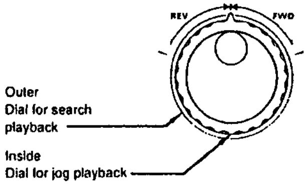
The unit is placed in the search mode by turning the outside ring of the search dial.
A tape can be played back up to 11 times the normal speed.
In the search mode, the FF Lamp (forward direction) or REW Lamp (reverse direction) blinks.

- Set the search dial to its center click-stop position for still playback.

To release the search mode, press the PLAY, STOP, STILL, FF or REW Button.

Jog playback (inside ring)

The unit is placed in the jog mode when the search dial is set to the search/pause (center click-stop) position.
When the inside ring is now turned, the tape speed can be varied from –1x to +1x the normal tape speed.
Still playback is established when the inside ring is no longer turned.



- A color program may appear in black and white during search or jog playback: this is normal and not indicative of malfunctioning.
- The playback pictures may appear distorted during search or jog playback: this is normal and not indicative of malfunctioning.
- No sound is heard during search or jog playback. Normal sound is heard at a tape speed of 1/2x or higher.

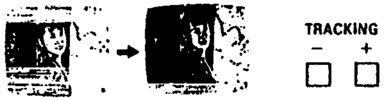
To Finish Playback

Press the STOP Button.

Still Playback and Slow-Motion Playback

The unit is placed in the still picture mode when the search dial is set to its center click-stop position.

- When noise appears during still playback, proceed with the slow tracking adjustment.



Slow Tracking Adjustment

If noise should appear at the top or bottom of the picture during still playback or slow-motion playback (1/25 to 1/2x normal tape speed), press the Tracking "+" or "–" Button to reduce the noise in the slow-motion playback mode.

- When still playback continues for more than 5 minutes, the unit will be placed automatically in the stop mode in order to protect the video heads.
- No sound is heard during still playback.
- During still playback a color program may appear in black or white or the playback image may darken: this is normal and not indicative of malfunctioning.

Field-by-Field Playback

Press the FF or REW Button during still playback. When the FF Button is pressed, the tape is fed by one field in the forward direction; when the REW Button is pressed, it is fed by one field in the reverse direction. When the FF or REW Button is kept depressed, the tape is played back in the forward or reverse direction at approximately 1/25th of the normal speed.

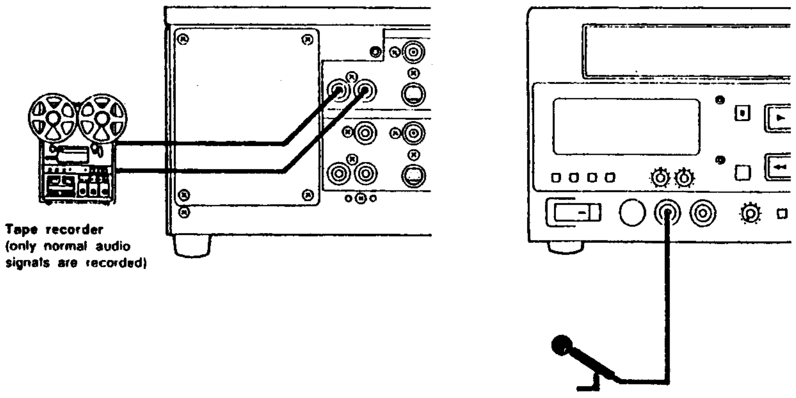
Unrecorded Blank Search

If a tape with unrecorded blanks lasting 5 or more seconds has been loaded, these blanks will be detected automatically.

(1) Load the tape.
(2) Press the BLANK SEARCH Button.
The tape is searched automatically in the forward direction and is stopped automatically when an unrecorded blank lasting 5 or more seconds is detected.

Audio Dubbing

"Audio dubbing" is a function which is used to record sound onto an already recorded tape. Sound can be recorded onto normal audio track CH1 or CH2 or onto both the CH1 and CH2 channels. (It cannot be recorded onto the Hi-Fi audio tracks.)


Tape recorder
(only normal audio signals are recorded)

Microphone
(only normal audio CH1 signals are recorded)

It is not possible to record MIC input audio and audio input signals at the same time. The microphone takes precedence when connections are made to both to the MIC jack and audio connectors.

Preparations

- Load the pre-recorded cassette tape.
  (Check that the accidental erasure prevention tab on the tape is still intact. When it has been broken out, the AUDIO DUB Button will not function even if it is pressed.)
- Using AUDIO DUB on the menu screen, select the channels on which the sound is to be added (audio dubbing).

Operation

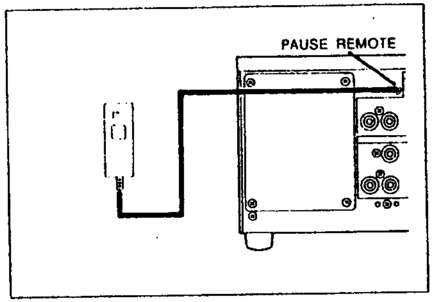
(1) Press the PLAY Button to start playback.
(2) Press the PAUSE/STILL Button where the sound is to be added (audio dubbing) to place the unit in the pause mode.
(3) Press the AUDIO DUB Button.
(4) Audio dubbing starts when the PAUSE Button is pressed to release the unit from the pause mode.
(5) To stop the audio dubbing, press the STOP Button.

- When audio dubbing is performed, the previously recorded sound will be erased and the new sound will be recorded in its place.
- Bear in mind that howling may occur if audio dubbing is performed with the unit placed near a TV set.
- Audio dubbing cannot be performed when the tape's accidental erasure prevention tab has been broken out.

Remote Controllers

VW-RM1 pause remote controller (optional accessory)

When the VW-RM1 pause remote controller is connected to this unit, recording can be set to the pause mode from a distance instead of using the button on the unit itself.



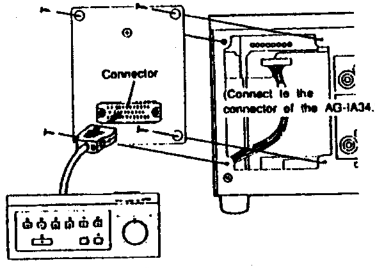
AG-A600 remote search controller (optional accessory)

When the AG-IA34 34-pin interface board, available as an optional accessory, is mounted, the unit can be operated by remote control at a distance of about 5 meters instead of the unit's own operation buttons being operated.

- The speed of the playback pictures can be varied up to about 11 times the normal speed in the forward or reverse direction.

Mounting the 34-pin interface board

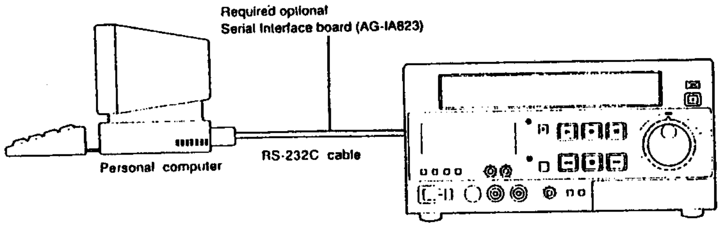
First remove the board mounting plate where the interface board is to be mounted, mount the board, connect the connector and screw the mounting board into place.



AG-A600 remote controller

Computer Remote Control

Using the optional RS-232C serial interface board (AG-IA823) and RS-232C cable, as shwon in the figure below, a personal computer can be used to operate the unit in various ways.



SECTION 2

DISASSEMBLY PROCEDURES

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2-1. DISASSEMBLY FLOWCHART

2-1 DISASSEMBLY FLOW CHART

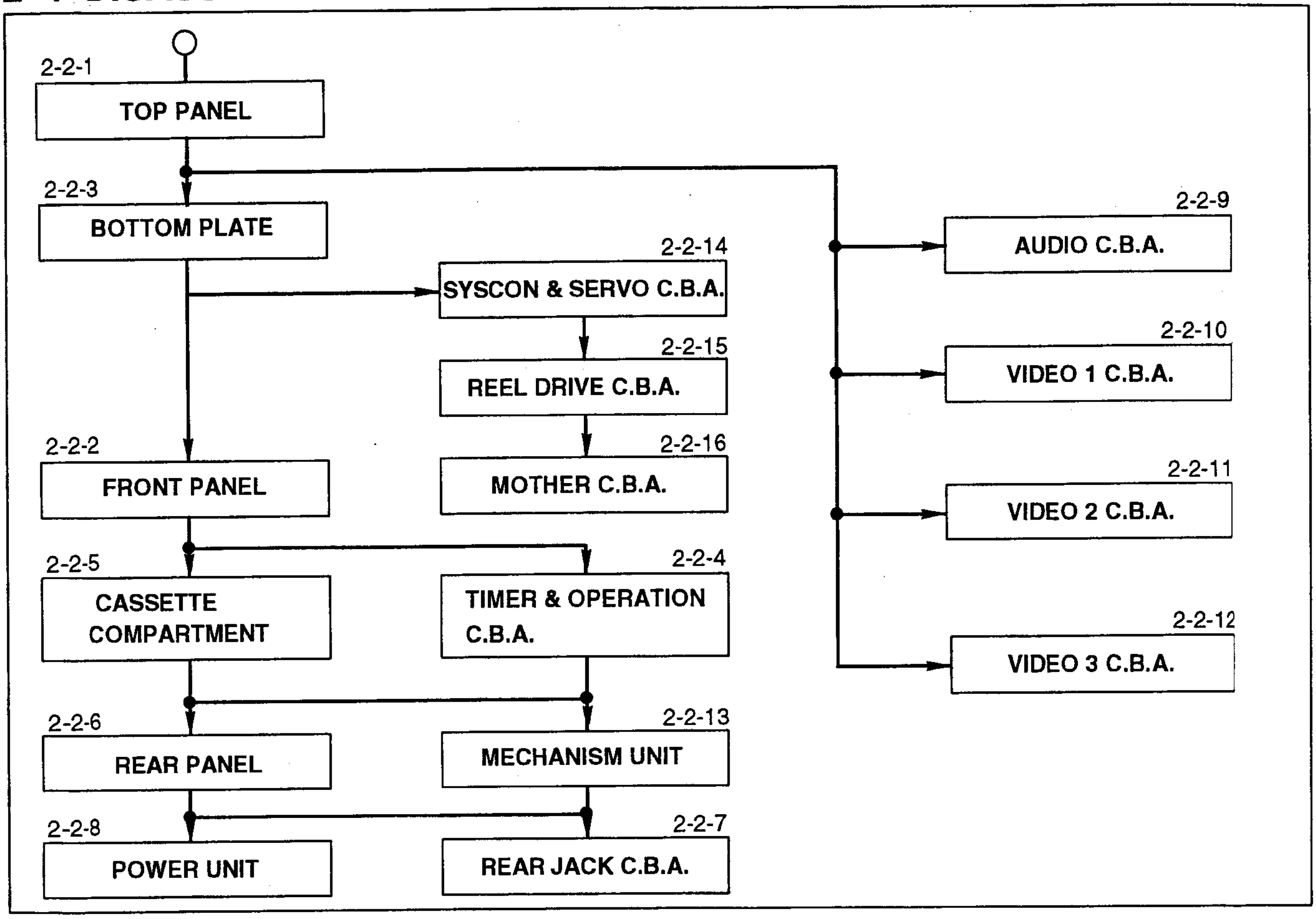

2-2-1
TOP PANEL
2-2-3
BOTTOM PLATE
2-2-14
SYSCON & SERVO C.B.A.
2-2-15
REEL DRIVE C.B.A.
2-2-16
MOTHER C.B.A.
2-2-2
FRONT PANEL
2-2-5
CASSETTE COMPARTMENT
2-2-4
TIMER & OPERATION C.B.A.
2-2-6
REAR PANEL
2-2-13
MECHANISM UNIT
2-2-8
POWER UNIT
2-2-7
REAR JACK C.B.A.
2-2-9
AUDIO C.B.A.
2-2-10
VIDEO 1 C.B.A.
2-2-11
VIDEO 2 C.B.A.
2-2-12
VIDEO 3 C.B.A.

Figure D1.

The above flowchart describes the order of steps for rmoving the cabinet parts and certain printed circuit boards in order to gain access to the unit, follow the steps in the reverse order.

2-2 DETAILED DISASSEMBLY METHOD

2-2-1. Removal of the Top Panel

1. Unscrew 2 screws (A) on the Top Panel.
2. Carefully lift the rear of the Top Panel and slide it as shown in the arrow (Figure D 2).

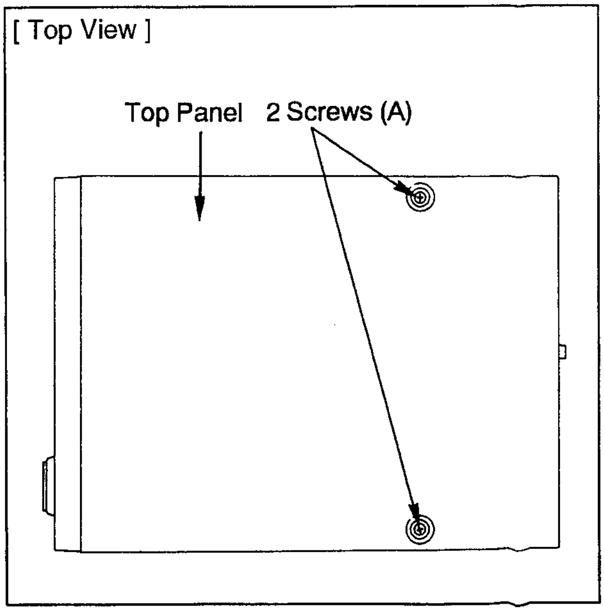
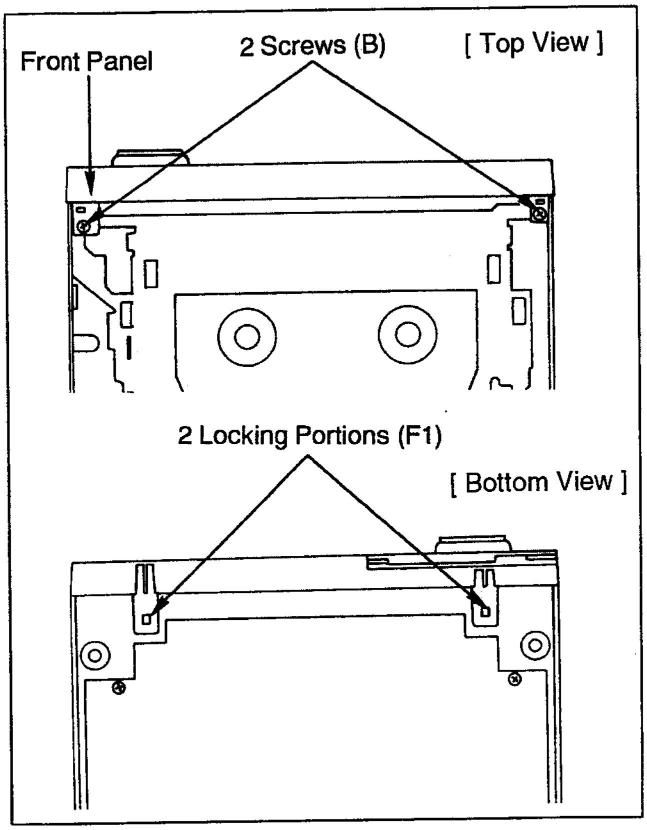

[Top View]
Top Panel
2 Screws (A)

Figure D2

2-2-2 Removal of the Front Panel

1. Remove the Jog Dial on the Front Panel.
2. Unscrew the 2 screws (B) as shown in the Figure.
3. Unlock 2 locking portions (F1), and carefully pull out the Front Panel from the deck (Figure D3.).


Front Panel
2 Screws (B)
[Top View]
2 Locking Portions (F1)
[Bottom View]

Firure D3

2-2-3. Removal of the Bottom Plate

1. Unscrew 6 screws (C)on the Bottom Plate.
2. Lift off the Bottom Plate (Figure D4.).

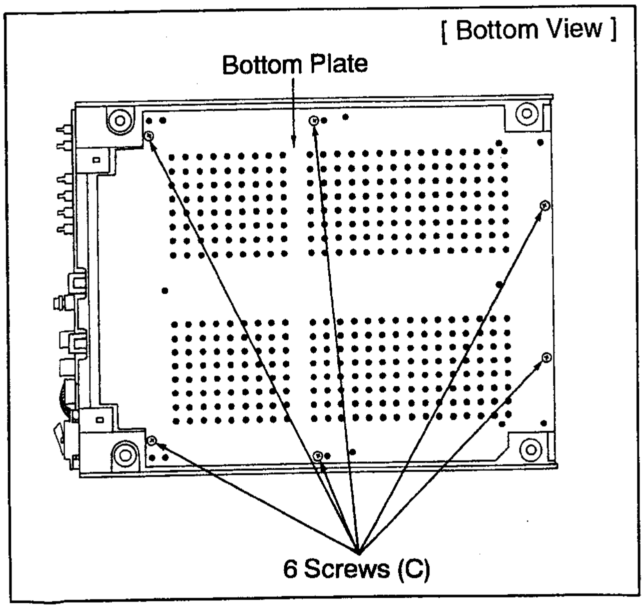

[Bottom View]
Bottom Plate
6 Screws (C)

Figure D4

2-2-4. Removal of the Timer and Operation C.B.A.

1. Disconnect the 2 Flexible Wires from the connector P6701 and P6702 on the Timer and Operation C.B.A..
2. Unscrew the 2 screws (D)and a screw (D-1) on the Timer and Operation C.B.A and unlock 5 locking portions (F2).
3. Carefully remove the Timer and Operation C.B.A. (Figure D5.)

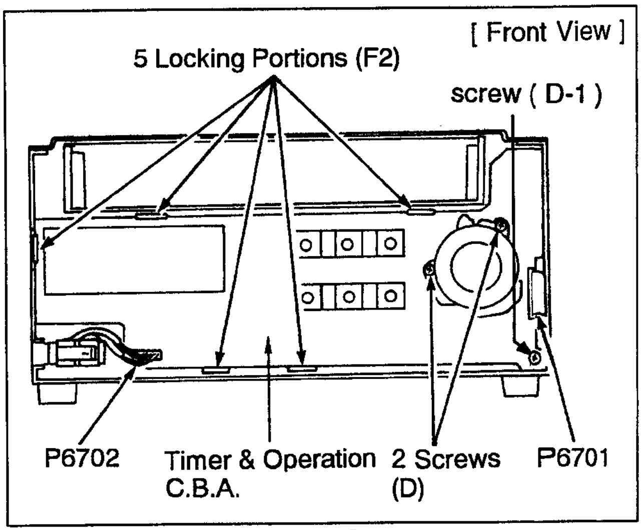

[Front View]
5 Locking Portions (F2)
screw (D-1)
P6702
Timer & Operation C.B.A.
2 Screws (D)
P6701

Figure D5

2-2-5. Removal of the Cassette Compartment Unit

1. Unscrew 2 screws(E) and slide the Cassette Holder Until appearing 2 screws (F) and then unscrew 2 screws (F) (Figure D6.).
2. Disconnect the Flexible Wire from connector P1508 mounted on the Front Loading C.B.A., then carefully pull out the Cassette Compartment Unit.

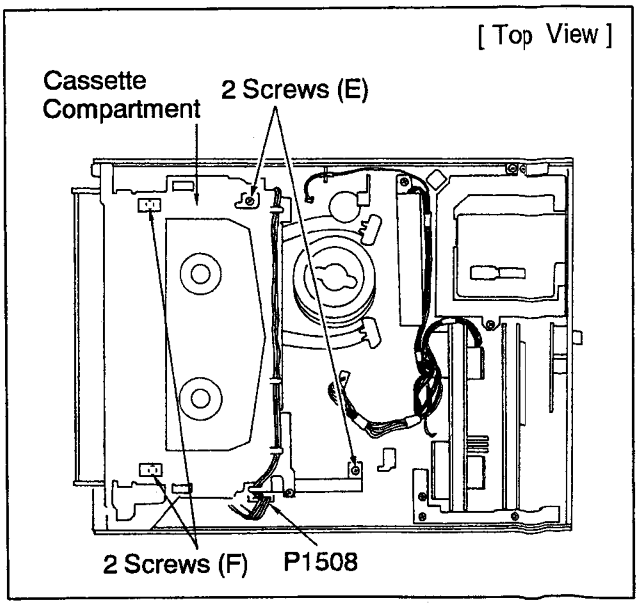

[Top View]
Cassette Compartment
2 Screws (E)
2 Screws (F)
P1508

Figure D6

2-2-6 Removal of the Rear Panel

1.Unscrew 4 screws (G) and a screw (H) on the Rear Panel.

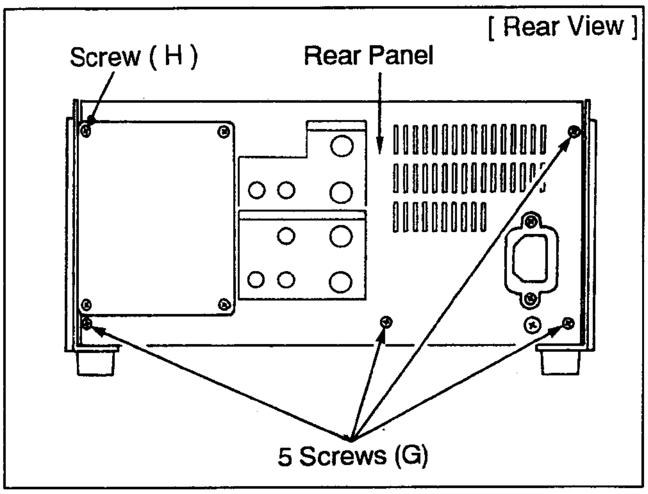

[Rear View]
Screw (H)
Rear Panel
5 Screws (G)

Figure D7

2-2-7 Removal of the Rear Jack C.B.A.

1. Unscrew the 5 screws (J) and unscrew the 2 screws (I) as shown in Figure D8.

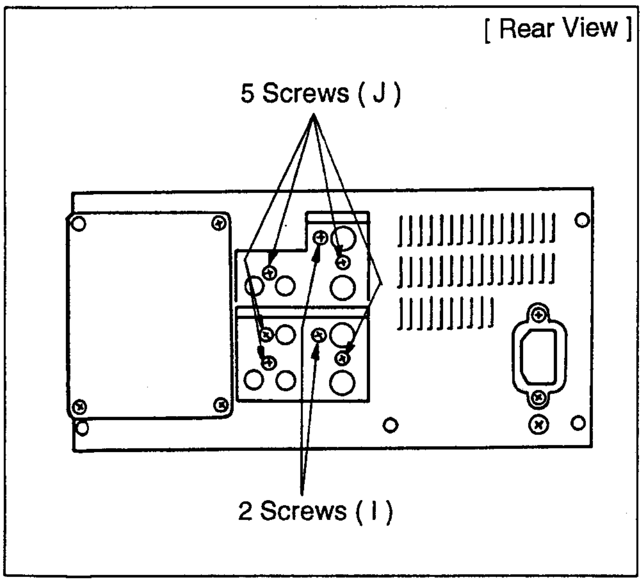

[Rear View]
5 Screws (J)
2 Screws (I)

Figure D8

2-2-8 Removal of the Power Unit

1. Disconnect the 2 Flexible Wires from the connector P1001 and P1102 on the Power Unit.
2. Unscrew 2 screws (K) on the Power Unit Shield Case (Figure D9.).
3. Carefully lift out the Power Unit.

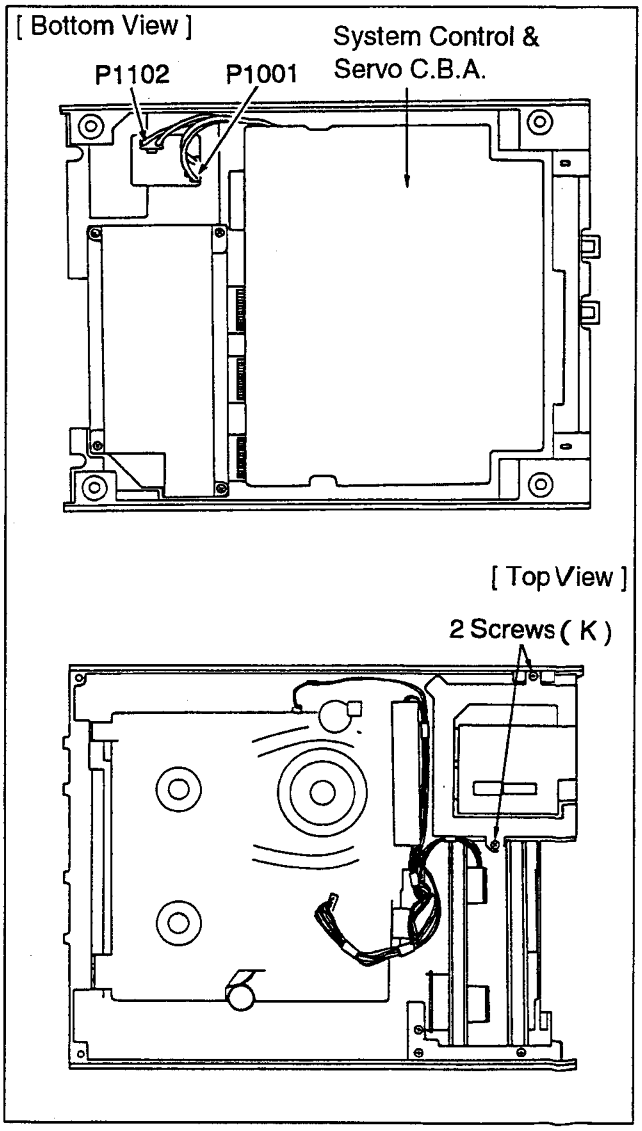

[Bottom View]
P1102
P1001
System Control & Servo C.B.A.
[Top View]
2 Screws (K)

Figure D9

2-2-9 Removal of the Audio C.B.A.

1. Disconnect the 4 Flexible Wires from the connector P4001, P4002, P4003 and P4502 on the Audio C.B.A. (Figure D10.).
2. Carefully pull out the Audio C.B.A. (Figure D11.).

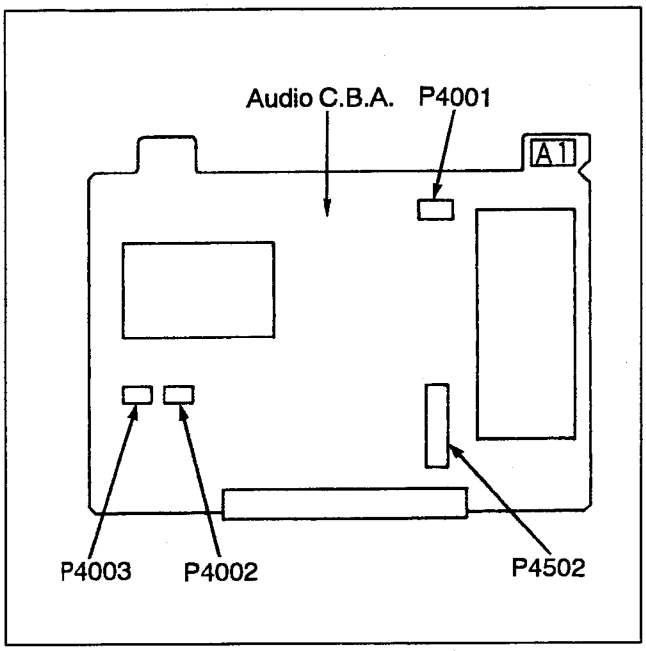

Audio C.B.A.
P4001
A1
P4003
P4002
P4502

Figure D10

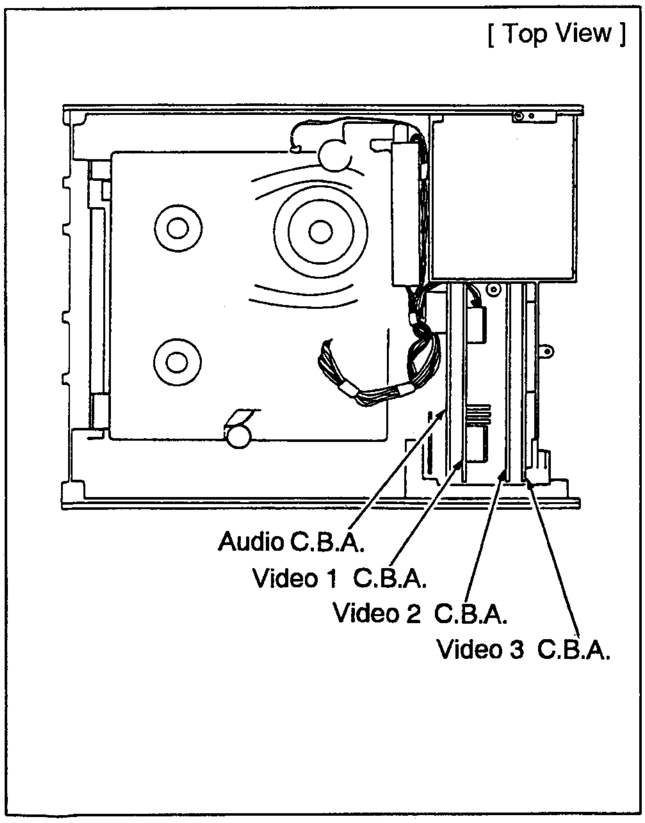

[Top View]
Audio C.B.A.
Video 1 C.B.A.
Video 2 C.B.A.
Video 3 C.B.A.

Figure D11

2-2-10 Removal of the Video 1 C.B.A.

1. Disconnect the Flexible Wires from the connector P3002 on the Video 1 C.B.A..
2. Carefully pull out the Video 2 C.B.A. (Figure D12.).

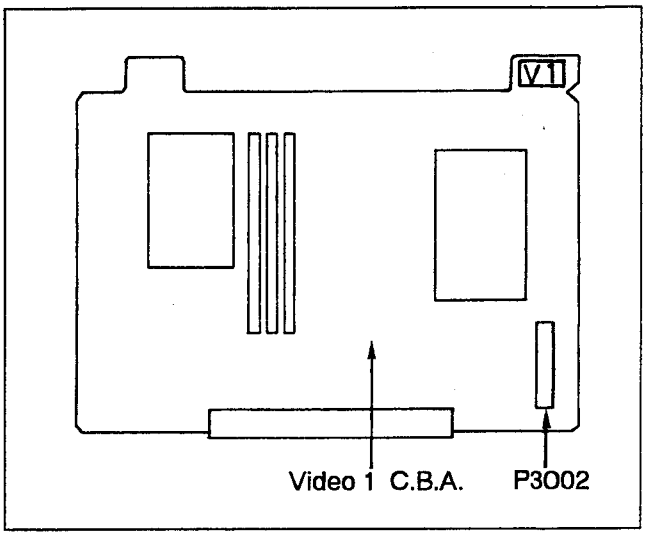

V1
Video 1 C.B.A.
P3002

Figure D12

2-2-11 Removal of the Video 2 C.B.A.

1. Carefully pull out the Video 2 C.B.A. (Figure D11.).

2-2-12 Removal of the Video 3 C.B.A.

1. Carefully pull out the Video 3 C.B.A. (Figure D11.).

2-2-13 Removal of the Mechanism Unit

1. Unscrew a screw (L) on the Head Amp Shield Case and carefully remove the Head Amp C.B.A..
2. Unscrew the 2 screws (M) on the Mechanism Unit and carefully remove the Mechanism Unit. (Figure D13-1 and D13-2.)

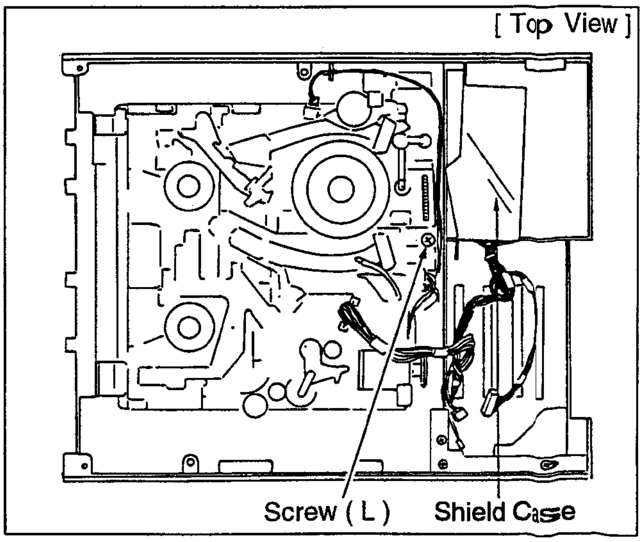

[Top View]
Screw (L)
Shield Case

Figure D13-1

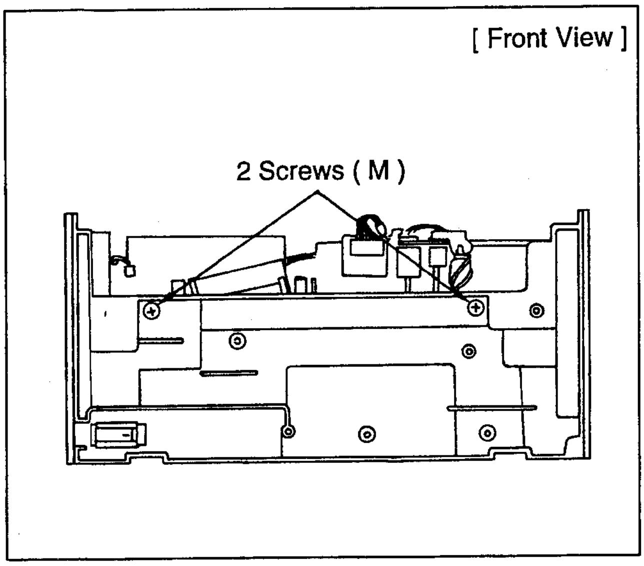

[Front View]
2 Screws (M)

Figure D13-2

2-2-14 Removal of the System Control & Servo C.B.A.

1. Unscrew the 4 screws (N) on the System Control & Servo C.B.A. and carefully open the System Control & Servo C.B.A. as shown in Figure D14.

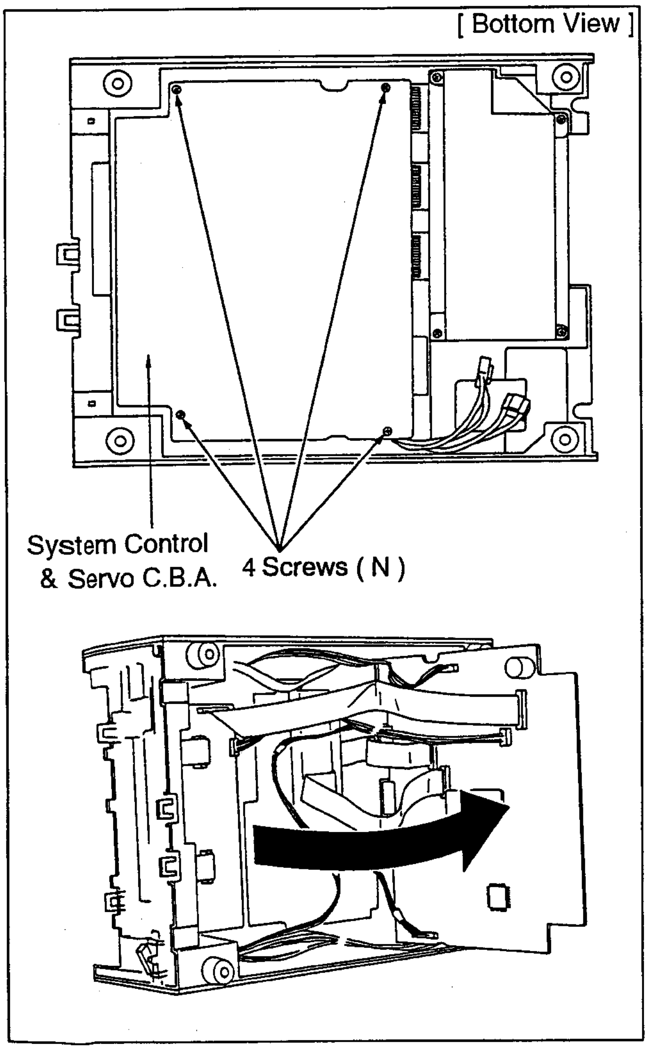

[Bottom View]
System Control & Servo C.B.A.
4 Screws (N)

Figure D14

2-2-15 Removal of the Reel Drive C.B.A.

1. Disconnect the 4 Flexible Wires from the P2701, P2702,P2704 and P2705 on the Reel DriveC.B.A..
2. Unlock the 3 clamps (F3) on the Reel Drive C.B.A..
3. Remove the Reel Drive C.B.A..

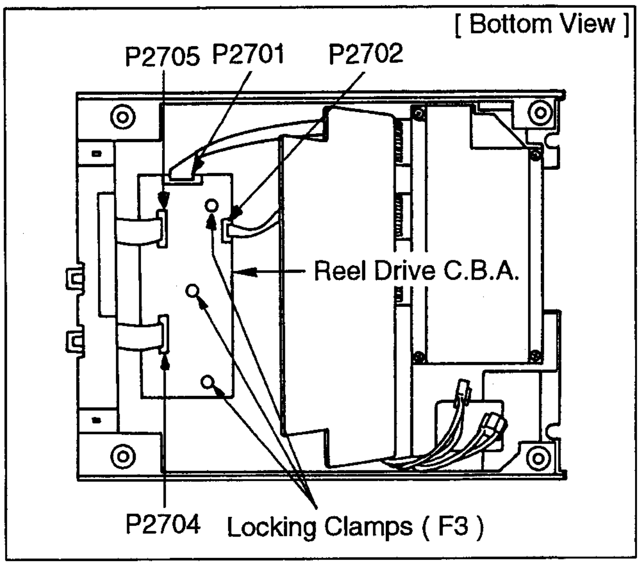

[Bottom View]
P2705
P2701
P2702
Reel Drive C.B.A.
P2704
Locking Clamps (F3)

Figure D15

2-2-16 Removal of the Mother C.B.A.

Note: Before removing the Mother C.B.A., be sure to remove the Power Unit, Rear Jack C.B.A., Video Video (1), (2) and (3) C.B.A., Audio C.B.A., and System control & servo C.B.A..

1. Unscrews the 4 screws (O) on the Mather C. B.A..
2. Carefully pull out the Mother C.B.A..

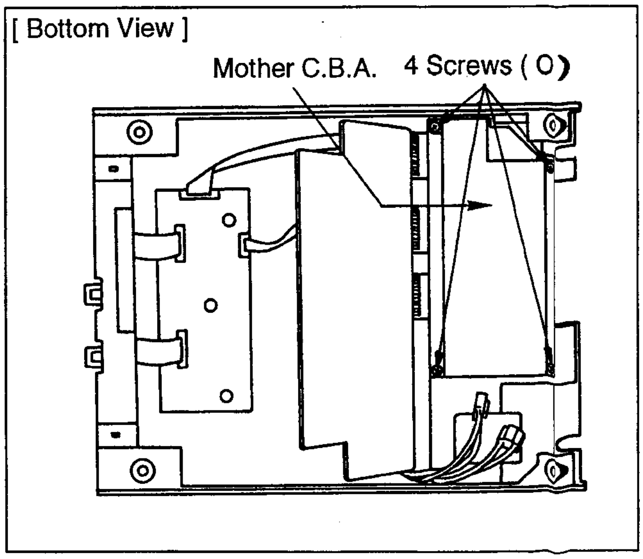
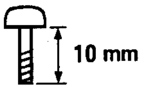
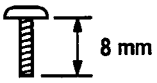
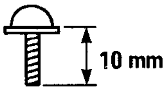
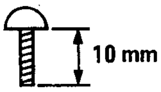
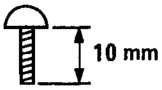
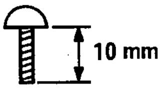
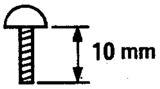
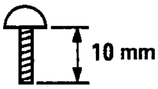
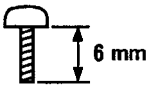
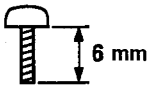
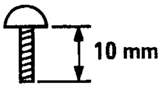
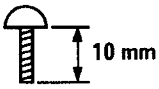
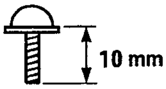
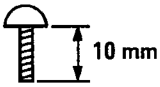
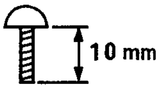
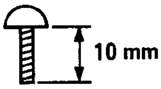

[Bottom View]
Mother C.B.A.
4 Screws (O)

Figure D16

2-3. SCREWS

(A)  10 mm VHD0222 (SILVER)	(B)  8 mm XTW3+10LR (BLACK)	(C)  10 mm XTV3+10JFR (GOLD)	(D)  10 mm XTV3+10JFR (RED)	(D-1)  10 mm XTV4+10JFR (RED)
(E)  10 mm XTV4+10JFR (RED)	(F)  10 mm XTV4+10JFR (RED)	(G)  10 mm XTV4+10JFR (RED)	(H)  6 mm XYN26+6FE (BLACK)	(I)  6 mm XYN26+6FE (BLACK)
(J)  10 mm XTV4+10JFR (RED)	(K)  10 mm XTV4+10JFR (RED)	(L)  10 mm XTV3+10JFR (GOLD)	(M)  10 mm XTV4+10JFR (RED)	(N)  10 mm XTV4+10JFR (RED)
(O)  10 mm XTV4+10JFR (RED)				

NOTE

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3-1. PARTS LOCATION

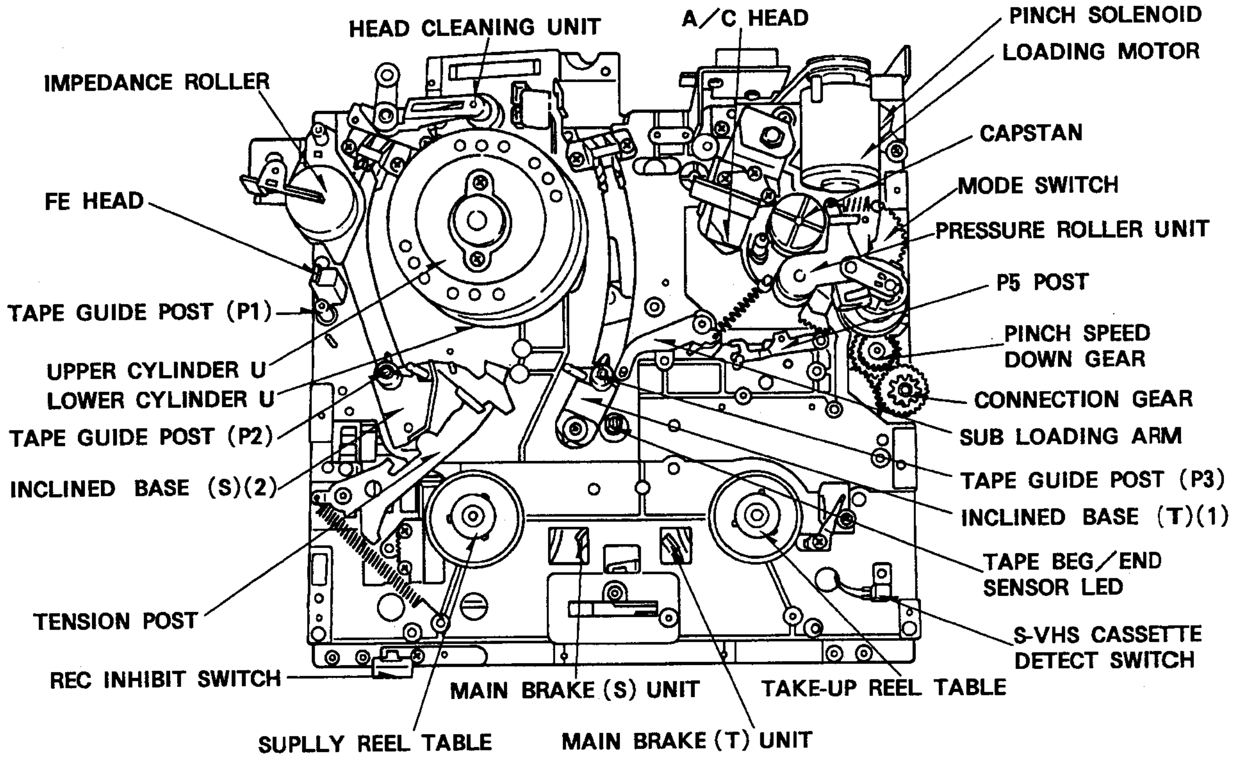

HEAD CLEANING UNIT
A/C HEAD
PINCH SOLENOID
LOADING MOTOR
IMPEDANCE ROLLER
CAPSTAN
MODE SWITCH
FE HEAD
PRESSURE ROLLER UNIT
P5 POST
TAPE GUIDE POST (P1)
PINCH SPEED DOWN GEAR
UPPER CYLINDER U
LOWER CYLINDER U
CONNECTION GEAR
TAPE GUIDE POST (P2)
SUB LOADING ARM
TAPE GUIDE POST (P3)
INCLINED BASE (S)(2)
INCLINED BASE (T)(1)
TAPE BEG/END SENSOR LED
TENSION POST
S-VHS CASSETTE DETECT SWITCH
REC INHIBIT SWITCH
MAIN BRAKE (S) UNIT
TAKE-UP REEL TABLE
SUPLLY REEL TABLE
MAIN BRAKE (T) UNIT

Figure M1 Top View

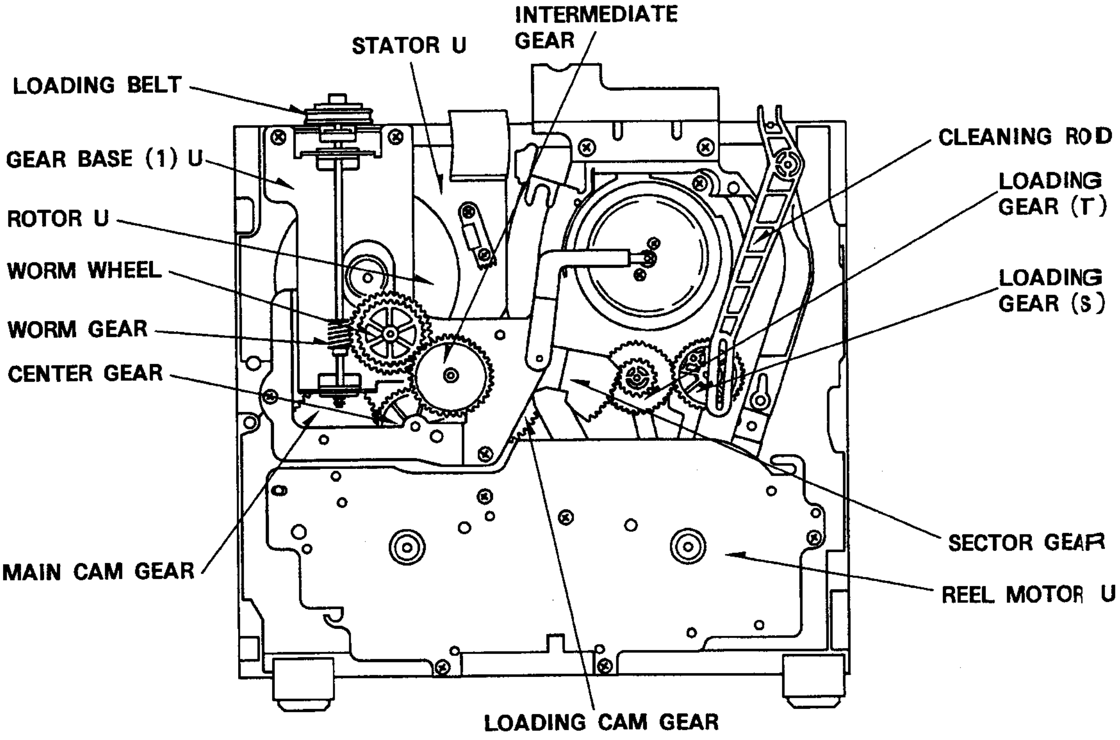
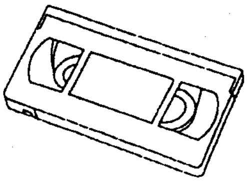
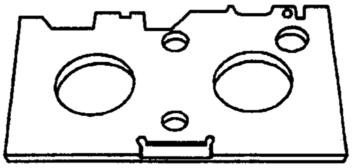
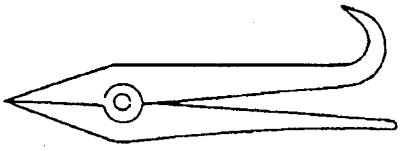
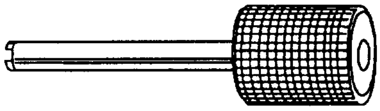
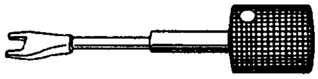
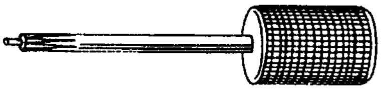
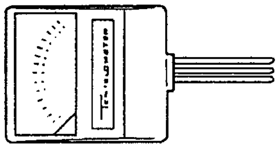
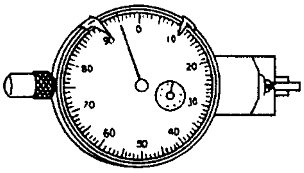
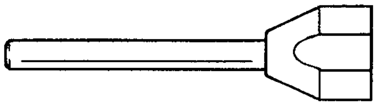
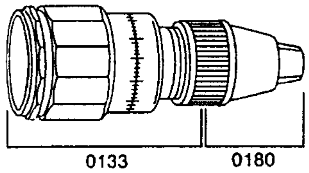
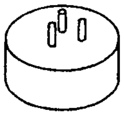
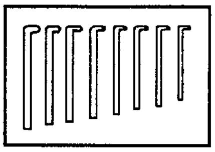
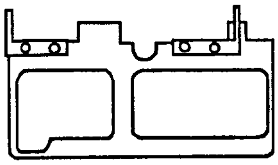
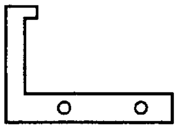
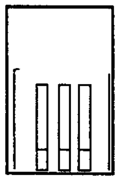
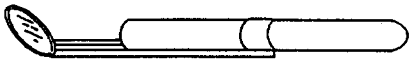
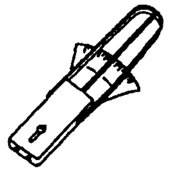
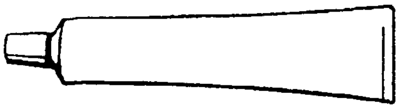
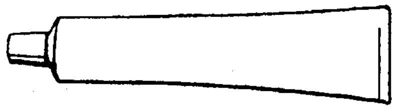

INTERMEDIATE GEAR
STATOR U
LOADING BELT
GEAR BASE (1) U
CLEANING ROD
LOADING GEAR (T)
ROTOR U
WORM WHEEL
LOADING GEAR (S)
WORM GEAR
CENTER GEAR
SECTOR GEAR
MAIN CAM GEAR
REEL MOTOR U
LOADING CAM GEAR

Figure M2 Bottom View

3-2. SERVICING FIXTURES AND TOOLS

The specified servicing fixture must be used to conduct adjustment.
The following fixtures, tools and measuring equipments are required to conduct complete Adjustments.

VFM8080HQFP ; VHS Alignment Tape 	**VFK0191 ; Post Adjustment Plate** 	**VFK0335 ; Retaining Ring Remover** 
VFK0329 ; Post Adj. Screwdriver 	**VFK0328 ; H-Position Adj. Screwdriver** 	**VFK0330 ; Fine Adj. Screwdriver (3mm)** 
VFK0132 ; Back Tension Meter **(Tentelometer, Made in U.S.A)** 	**VFK0190 ; Reel Table Height Fixture** 	**VFK0851 ; Centering Fixture** 
VFK0133 ; Dial Torque Gauge **VFK0180 ; Plastic Clamper Only** 	**VFK0134 ; Adaptor for VFK0133** 	**VFK0326 ; Hex. Wrench Set** **(0.7, 0.9, 1.2, 1.5, 1.6, 2, 2.4, 3 mm)** 
VFK0236 ; Tension Post Adj. Plate 	**VFK0806 ; Tension Sensor Adj. Fixture** 	**VFK27 ; Head Cleaning Stick** 
VFK0269 ; L Type Screwdriver 	**VFM0948 ; Check Light** 	**VFK66 ; Fan Type Tension Gauge** 
VFK0680 ; S.C.R. Grease (White) **(for plastic part)** 	**MOR265 ; Morlytone Grease (Black)** **(for metal part)** 	**VFK0131 ; High Quality Oil** **(for Capstan)** **Cleaning Liquid (Alchol)** **(Tape Tronsport Rubber Parts etc.)** **<< PURCHASE LOCALLY >>**

3-3. HOW TO EJECT MANUALLY

If the electrical circuit is defective and the action of unloading and front unloading don't work properly, it is possible to eject manually as follows.

1. Take out the Main AC.
2. Release the direction as shown in Figure M3.
3. Release the Wormshaft to clockwise unit cassette is ejected.

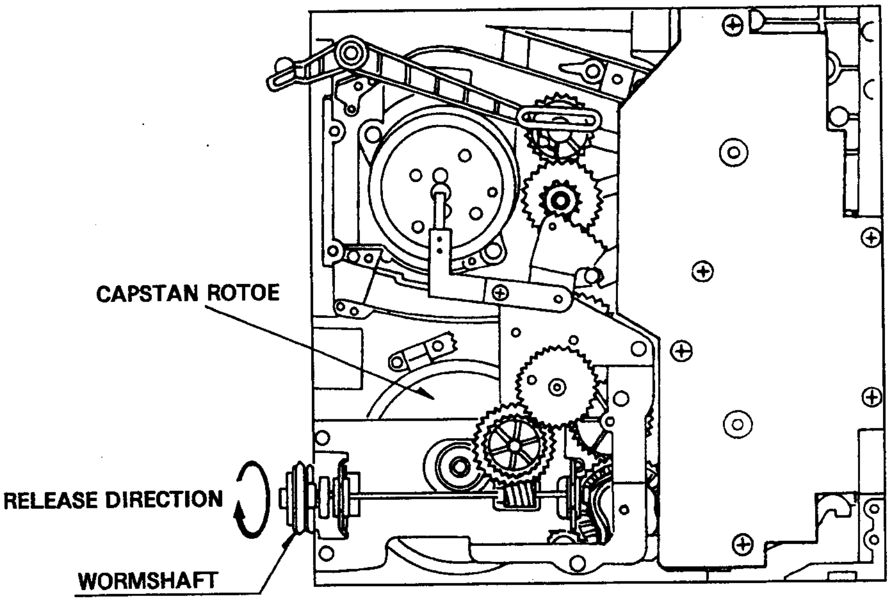

CAPSTAN ROTOE
RELEASE DIRECTION
WORMSHAFT

Figure M3 How to Eject Manually

3-4. MAINTENANCE PROCEDURES

3-4-1. REGULAR MAINTENANCE

The purpose of periodic maintenance is to preserve the functioning of this machine throughout its useful life. The user or service dealer should perform these maintenance regularly to ensure that maximum utility is obtained from the machine.

The VCR is a complicated place of equipment. It contains many belts, rollers, heads etc., which become worn, and deteriorate as time goes by, causing trouble. Dust and dirt will also impede the proper functioning of the machine. In light of this, it is very important that overall maintenance be done according to the maintenance chart to maintain the functions of the VCR, and to avoid accidental problems. This maintenance should also be performed after any repairs are done on the equipment.

The VCR used for business applications requires particular attention for several reasons. The installation conditions and applications are not always the best. Long use times, or poor environmental conditions may adversely affect the lifespan and performance of the machine. Regular maintenance assures that the purchaser obtains the maximum value for his expenditure. Accordingly, the necessity of regular maintenance should be fully explained at the time of sale, as well as during after-sale repairs.

3-4-2. MAINTENANCE CHART

The following periodic maintenance is required to prolong the life of the machine.

Ref. No. IN P/L	Parts Name	Hour									
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000
———	Tape Transporter	●	●	●	●	●	●	●	●	●	●
1-19	A/C Head U	●	●	●	●	●	●	●	◎	●	●
1-41	Upper Cylinder	●	◎	●	◎	●	◎	●	◎	●	◎
1-42	Cylinder U	●	●	●	●	●	●	●	◎	●	●
2-24	Supply Reel Table U								◎		
2-23	Takeup Reel Tuble U								◎		
2-8	Stator Base Unit								◎		
2-28	Capstan Rotor U	●	●	●	●△	●	●	●	●△	●	●
1-25	Pressure Roller U	●	●	●	◎	●	●	●	◎	●	●
1-68	Head Cleaning U		◎		◎		◎		◎		◎
2-16	Main Brake (S)				◎				◎		
2-18	Main Brake (T)				◎				◎		
2-2	Loading Belt				◎				◎		
2-39	Loading Cam Gear								▲		
2-1	Worm Shaft								×		
2-3	Worm Wheel								×		
1-56	FE Head	●	●	●	●	●	●	●	◎	●	●
1-36	Mode Switch								◎		
2-33	Main Cam Gear								▲		
1-48	Inclined (S) U								▲		
1-45	Inclined (T) U								▲		
1-7	Loading Motor U								◎		
1-39	P5 Arm U								▲		

✻NOTE:

Symbol	Maintenance	Requirement	Remark
●	Cleaning	Ethyl-alcohol or Cleaning Liquid (Purchase locally)	Wipe dirt from the parts using soft cloth impregnated with Ethyl-Alcohol. Note: When cleaning rubber parts, avoid using excessive alcohol since it may accelerate deterioration of these parts. After cleaning with alcohol, wipe the alcohol quickly and thoroughly.
◎	Replacement		
△	Lubrication	High Quality Spindle Oil (Purchase locally)	Supply one or two drops of oil.
▲	Greasing	Molytone Grease (MOR265)	Wipe the old grease and apply new grease.
×	Greasing	S.C.R. Grease (VFK0680)	Wipe the old grease and apply new grease.

3-4-3. LUBRICATION PROCEDURES OF THE CAPSTAN SHAFT

1. Remove the Pressure Roller Unit.
2. Remove the Thrust Screw.
3. Apply two drops of the oil (VFK0131) on the top of Capstan Shaft as shown in Figure M6-A.

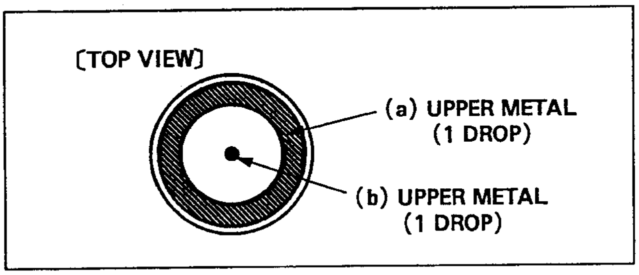

[TOP VIEW]
(a) UPPER METAL (1 DROP)
(b) UPPER METAL (1 DROP)

Figure M6-A

4. Turn the Thrust Adjustment Screw slowly to clockwise until the Capstan Rotor just starts turning (separate from the Capstan Stator).
5. Turn the Thrust Adjustment Screw another 180° clockwise as shown in Figure M6-B.
6. Install the Pressure Roller Unit.
7. Wipe the extra oil.

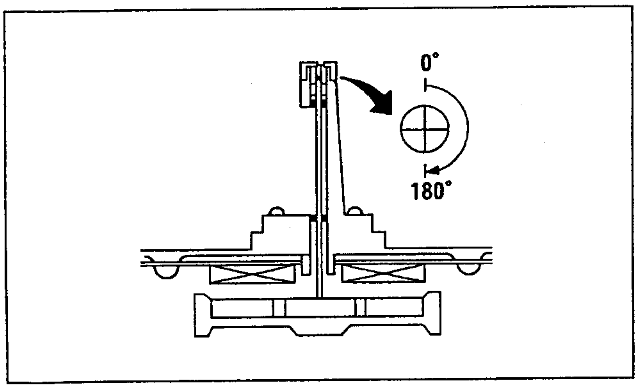


Figure M6-B

3-4-4. PROCEDURES FOR CLEANING OF THE CYLINDER UNIT

1. Position the Video Head to permit access for cleaning and hold the upper cylinder to keep it from turning while cleaning.
2. Gently rub the Video Head in direction of tape travel with Head Cleaning Stick moistened with Cleaning.
3. Repeat for the other video heads (Figure M7).

Note: 1. Do not rub vertically.
2. Do not apply any pressure to heads.

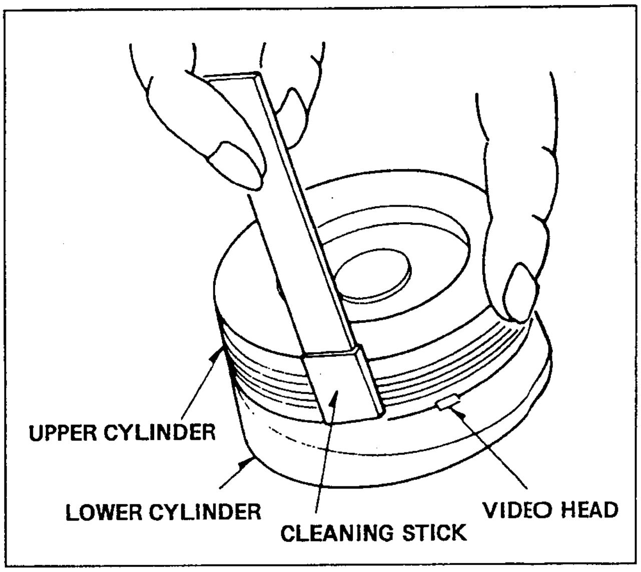

UPPER CYLINDER
LOWER CYLINDER
CLEANING STICK
VIDEO HEAD

Figure M7

3-4-5. ADJUSTMENTS AFTER RE-INSTALLING THE UPPER CYLINDER, LOWER CYLINDER

AFTER RE-INSTALLING THE UPPER CYLINDER OR LOWER CYLINDER

MECHANICAL ADJUSTMENT

3-6-3. FINE ADJUSTMENT OF THE GUIDE POST HEIGHT

3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

ELECTRICAL ADJUSTMENT

4-3-1. PG SHIFTER ADJUSTMENT

4-3-11. S-VHS RECORDING CURRENT ADJUSTMENT

4-3-12. VHS RECORDING CURRENT ADJUSTMENT

4-3-28. Fi-Fi AUDIO HEAD SWITCHING SHIFTER ADJUSTMENT

4-3-31. Hi-Fi AUDIO REC CURRENT ADJUSTMENT

3-4-6. ADJUSTMENTS AFTER RE-INSTALLING THE A/C HEAD UNIT

AFTER RE-INSTALLING THE A/C HEAD UNIT

MECHANICAL ADJUSTMENT

3-6-3. FINE ADJUSTMENT OF THE GUIDE POST HEIGHT
- A. COARSE ADJUSTMENT OF THE A/C HEAD HEIGHT
- B. COARSE ADJUSTMENT OF THE A/C HEAD TILT
- C. ADJUSTMENT OF THE A/C HEAD AZIMUTH
- D. ADJUSTMENT OF THE A/C HEAD TILT & AZIMUTH
- E. ADJUSTMENT OF LOOK SCREW
- F. FINE ADJUSTMENT OF THE A/C

3-6-3. FINE ADJUSTMENT OF THE GUIDE POST HEIGHT

3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

ELECTRICAL ADJUSTMENT

4-3-24. NORMAL AUDIO FREQUENCY RESPONCE ADJUSTMENT

4-3-25. NORMAL AUDIO PLAYBACK GAIN ADJUSTMENT

4-3-26. NORMAL AUDIO BIAS CURRENT ADJUSTMENT

4-3-27. NORMAL AUDIO REC CURRENT ADJUSTMENT

3-5. MECHANICAL PARTS REPLACEMENT PROCEDURES

3-5-1. REPLACEMENT OF THE UPPER CYLINDER UNIT

1. First remove two screws as shown in Figure M10-A.
   Then unsolder of the soldered portions indicated by arrows on the Upper Cylinder, and finally remove the Upper Cylinder.

Note: Soldered portion can be easily removed by using solder sucking wire, etc.

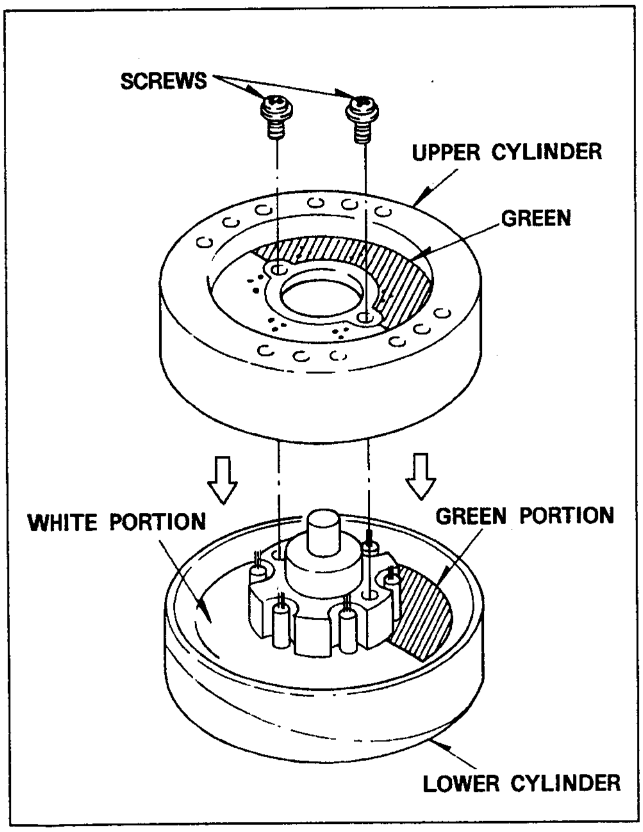

SCREWS
UPPER CYLINDER
GREEN
WHITE PORTION
GREEN PORTION
LOWER CYLINDER

Figure M10-A

2. The Upper Cylinder unit can be reinstalled by reversing the removal procedure.
   However, when Upper Cylinder is installed, be extremely carefully so that white portion of P.C.Board of Upper Cylinder correctly matches the white portion of bottom cylinder as shown in Figure M10-A.

Note: If the Upper Cylinder Unit is reversal installed, no color will appear when playing back pre-recorded tapes.

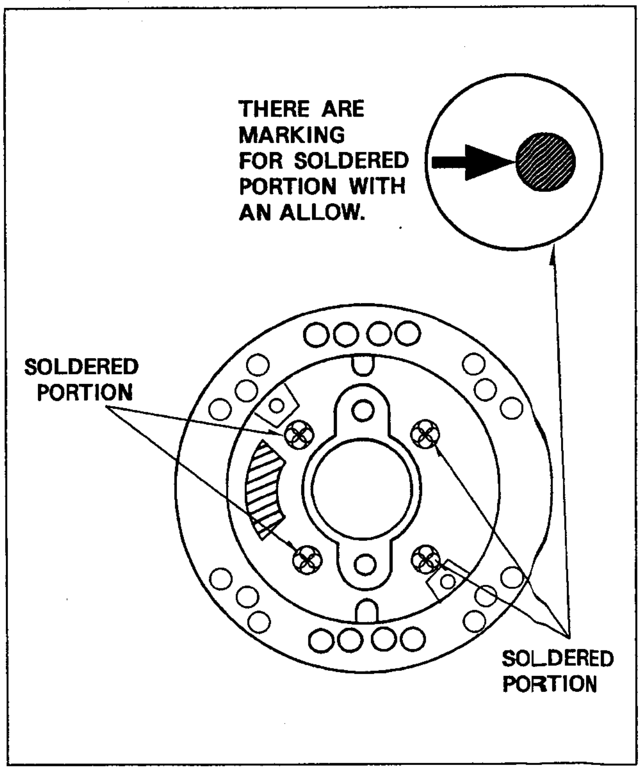

THERE ARE MARKING FOR SOLDERED PORTION WITH AN ALLOW.
SOLDERED PORTION
SOLDERED PORTION

Figure M10-B

3-5-2. REPLACEMENT OF THE LOWER CYLINDER UNIT

1. Unscrew the 2 screws and remove the Head Amp.
2. Remove the Cleaning rod from bottom side.
3. Unscrew 3 screws (A). Since there is very little clearance between DD Cylinder (Lower Cylinder) Unit and Chassis, remove the Cylinder gently and carefully (Figure M11).

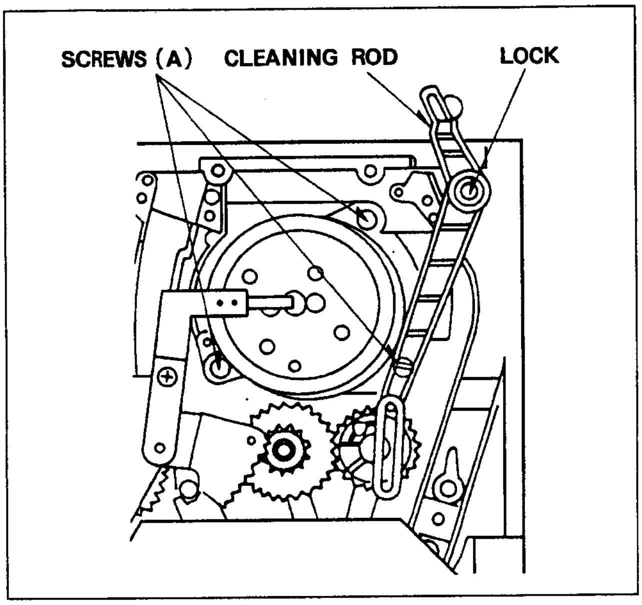

SCREWS (A)
CLEANING ROD
LOCK

Figure M11

4. Reinstall the new DD Cylinder (Lower Cylinder) Unit in the chassis, tighten the 3 screws (A). Then connect a connectors and reinstall the Cleaning Rod.
5. Re-install the Head Amp C.B.A.

Note: After reinstall the Upper Cylinder Unit should be perform Mechanical and Electrical adjustment (Refer to 3-4-5. Maintenance Procedures).

3-5-3. REPLACEMENT OF THE A/C HEAD (1) UNIT

1. Disconnect a connector (Figure M12).
2. Unscrew 3 (B)(C)(D) screws with spring and then remove the A/C Head Unit (Figure M12).

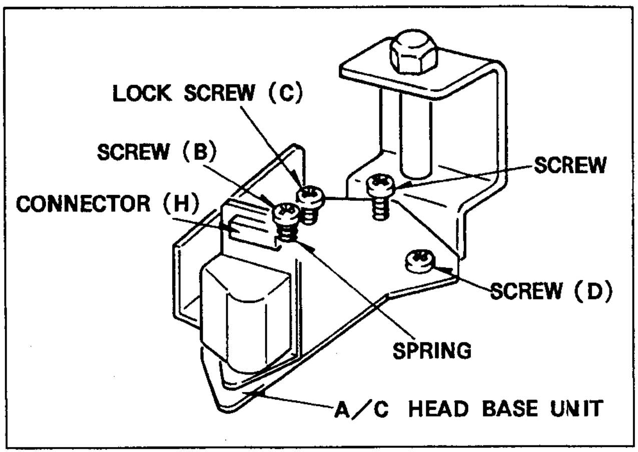

LOCK SCREW (C)
SCREW (B)
CONNECTOR (H)
SCREW
SCREW (D)
SPRING
A/C HEAD BASE UNIT

Figure M12

3. The A/C Head (1) Unit can be reinstalled by reversing the removal procedure.

Note: After reinstall the Upper Cylinder Unit should be perform Mechanical and Electrical adjustment (Refer to 3-4-6. Maintenance Procedures).

3-5-4. REPLACEMENT OF THE FULL ERASE HEAD

1. Disconnect a connector.
2. Unscrew a screw (E) and remove the Full Erase Head (Figure M13).

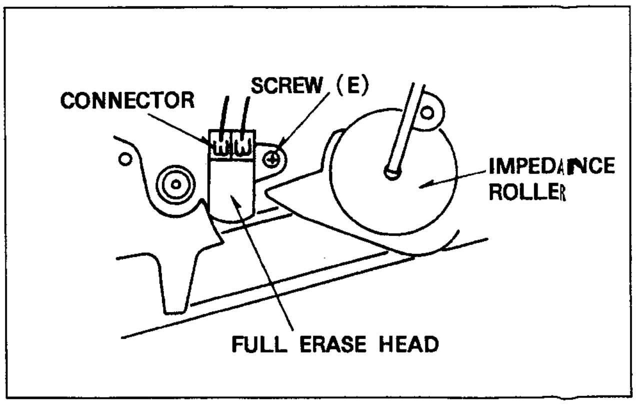

CONNECTOR
SCREW (E)
IMPEDANCE ROLLER
FULL ERASE HEAD

Figure M13

3. The new Full Erase Head can be reinstalled by reversing the removal procedure.

3-5-5. REPLACEMENT OF THE CAPSTAN ROTOR AND CAPSTAN STATOR

When replacing the Capstan stator unit the centre Fixing Tool must be used to fix the centre of Capstan Stator Unit.

1. Remove the loading belt.
2. Unscrew the 4 (F) screws and remove the Gear base Unit.
3. Carefully lift up the capstan rotor from the capstan housing, taking care so as not loose the 2 oil seals as shown in Figure M14-A.

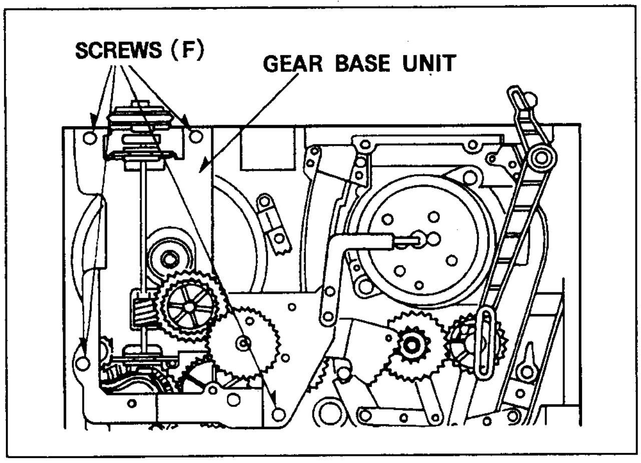

SCREWS (F)
GEAR BASE UNIT

Figure M14-A

4. Remove the 2 oil seals.
5. Unscrew the 3 (G) screws and remove the Capstan Stator.
6. Place the capstan stator unit into position.
7. Loosely tighten the 3 (G) screws.
8. Insert the Centre Fixing Tool as shown in Figure M14-B.

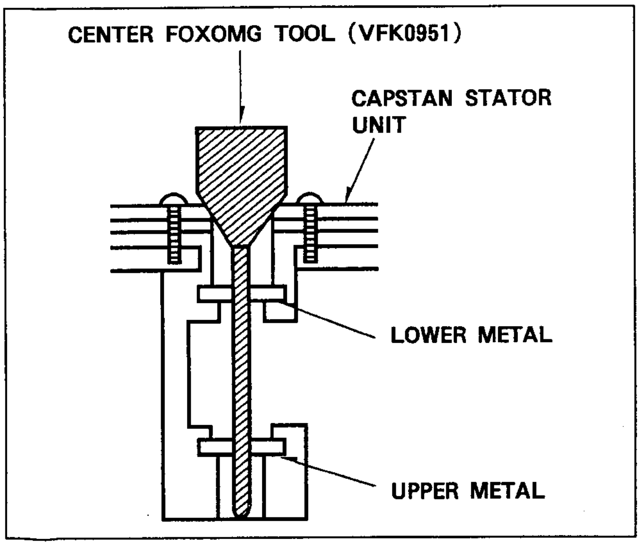

CENTER FOXOMG TOOL (VFK0951)
CAPSTAN STATOR UNIT
LOWER METAL
UPPER METAL

Figure M14-B

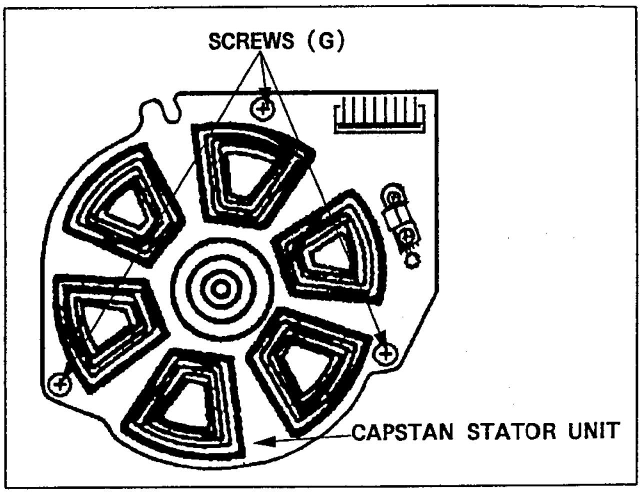

SCREWS (G)
CAPSTAN STATOR UNIT

Figure M14-C

9. Tighten the 3 (G) screws.
10. Remove the centre fixing tool.
11. The new capstan rotor unit can be reinstalled by reversing the removal procedure.

3-5-6. REPLACEMENT OF THE CAPSTAN HOUSING UNIT

1. Remove the pressure Roller Unit.
2. Remove the Sub post spring from hook of Capstan Housing.
3. Unscrew the 3 screws (H) and remove the Capstan Housing.
4. Remove the 2 oil seals and thrust screw.

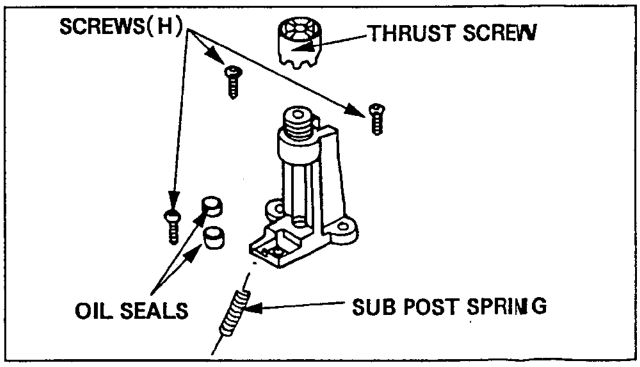

SCREWS(H)
THRUST SCREW
OIL SEALS
SUB POST SPRING

Figure M15

5. Replace the new Capstan Housing, 2 oil seals and thrust screw at same time.
6. Re-install the Capstan Housing Unit by reversing the remove procedure.

Note: After re-installing the thrust screw adjustment of the thrust screw are required.
Replace the new Capstan Rotor, 2 oil seals and thrust screw at same time.

After re-installing the capstan rotor or capstan stator confirmation of FG out put level and adjustment of FG head gap are required.

3-5-7. REPLACEMENT OF THE INCLINED BASE (S),(T)

Supply Side

1. Unscrew a screw (I) and remove the head cleaning plate unit as shown in Figure M16-A.
2. Unscrew the 2 screws (J) and remove the post stopper.

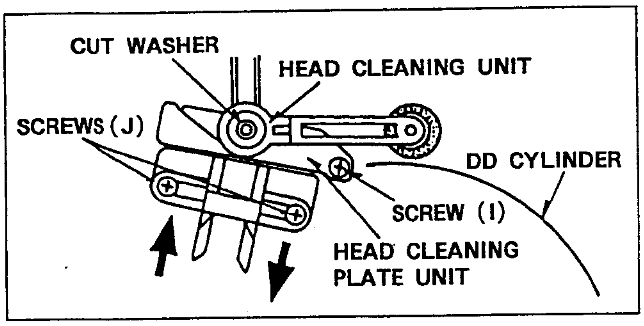

CUT WASHER
HEAD CLEANING UNIT
SCREWS (J)
DD CYLINDER
SCREW (I)
HEAD CLEANING PLATE UNIT

Figure M16-A

3. Remove the P2 post unit from loading arm (S) as shown in Figure M16-B.

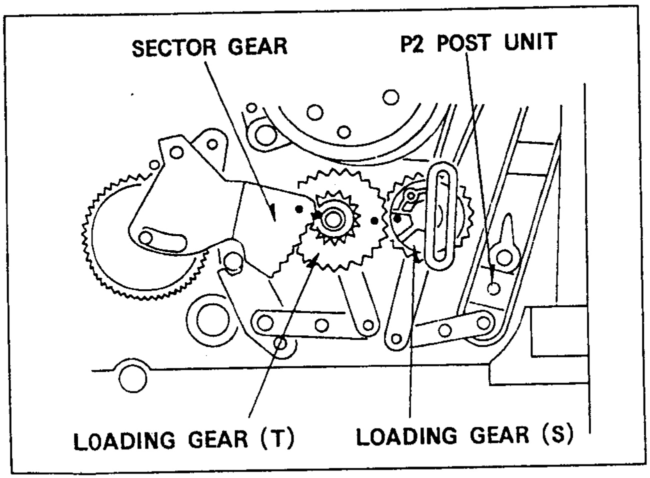

SECTOR GEAR
P2 POST UNIT
LOADING GEAR (T)
LOADING GEAR (S)

Figure M16-B

4. Pull out the Inclined base (S) from loading base.
5. The new inclined base unit can be reinstalled by reversing the removal procedure.

Note: Install post stopper pusing the arrow direction (A),(B) as shown in Figure M16-A.
After re-installing the inclined base (S) confirmation of tape interchangeability and P2, P3 posts adjustments are required.

Take-up Side

1. Unscrew a screw (K) and remove the inclined base (T) as show in Figure M14.

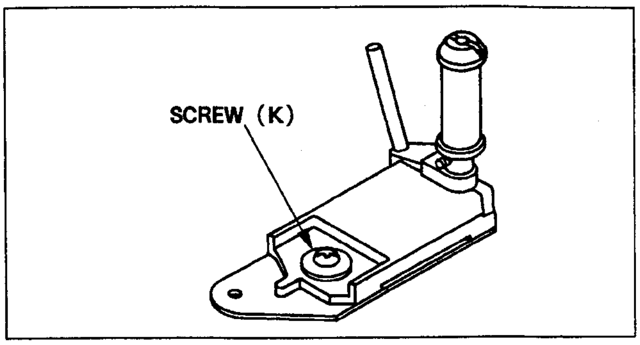


Figure M16-C

2. Install the inclined base (T) so that the tip of inclined base is center on the Plate Hole and then tighten screw (K).

Note: After re-installing the inclined base (T) confirmation of tape interchangeability and inclined base adjustment are required.

3-5-8. REPLACEMENT OF THE P5 POST

1. Remove the top cover and cassette holder.
2. Rotate the loading motor to clockwise, until the stop mode.
3. Remove the pressure roller unit.
4. Remove the pinch cam (Ref. to Replacement of the mode switch) and P5 pull out sector gear as shown in Figure M17.

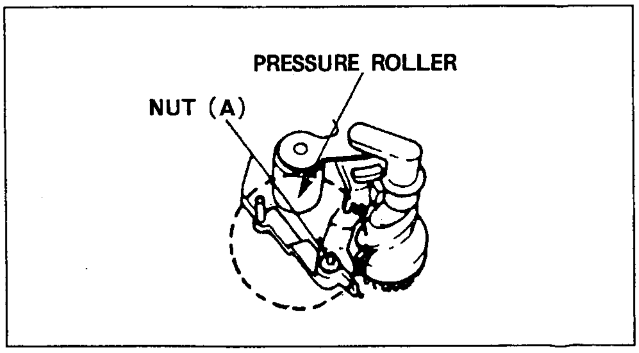

PRESSURE ROLLER
NUT (A)

Figure M17

5. Unscrew a Nut (A) and Remove the P5 Post.
6. The new P5 post can be reinstalled by reversing the removal procedure.

Note: After-reinstalling the P5 post confirmation of tape waving and P5 post height adjustment are required.

3-5-9. REPLACEMENT OF THE REEL UNIT

1. Remove 6 screws (L) and carefully lift the DD Reel Unit.
2. Disconnect a connector.

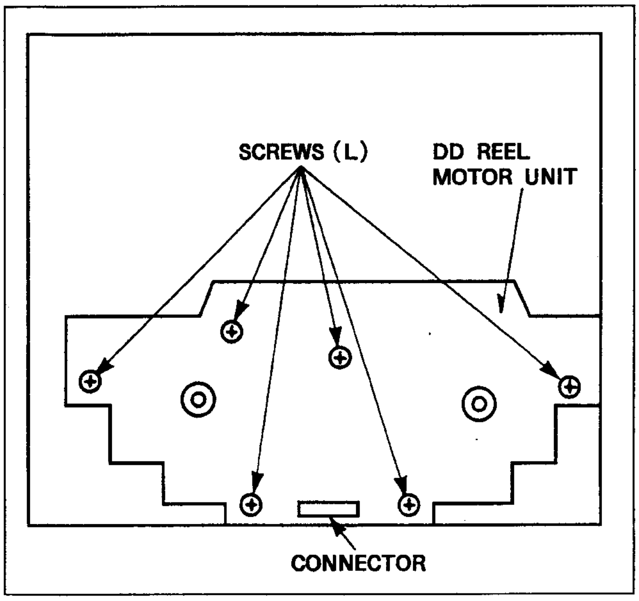

SCREWS (L)
DD REEL MOTOR UNIT
CONNECTOR

Figure M18-A

3. The Reel Motor Unit can be re-installed by reversing the removal procedure.

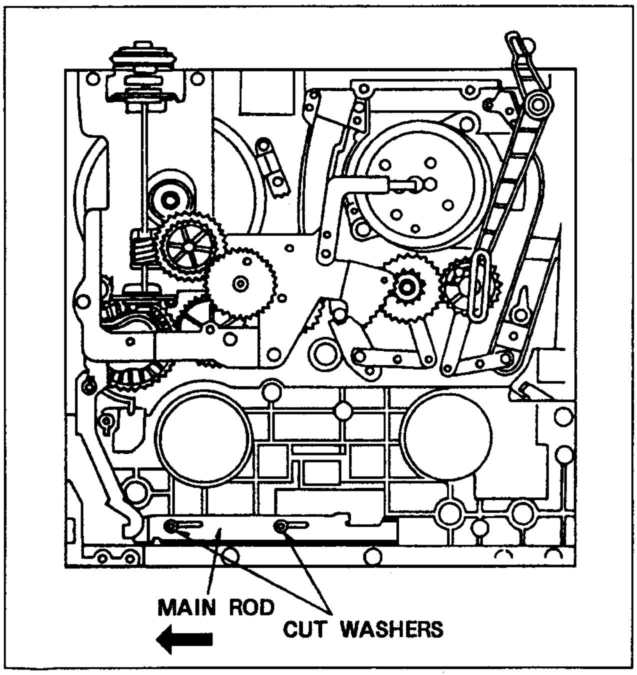

MAIN ROD
CUT WASHERS

Figure M18-B

Note: When assembling the DD Reel Motor Unit, side the Main Rod to far left side by rotating a center Gear.

3-5-10. REPLACEMENT OF THE MAIN BRAKE (S),(T) UNIT

1. Remove the Reel Unit (Refer to Replacement of the Reel Unit).
2. Remove a Retaining Ring (A).
3. Remove the Main Brake (S),(T) with a spring.

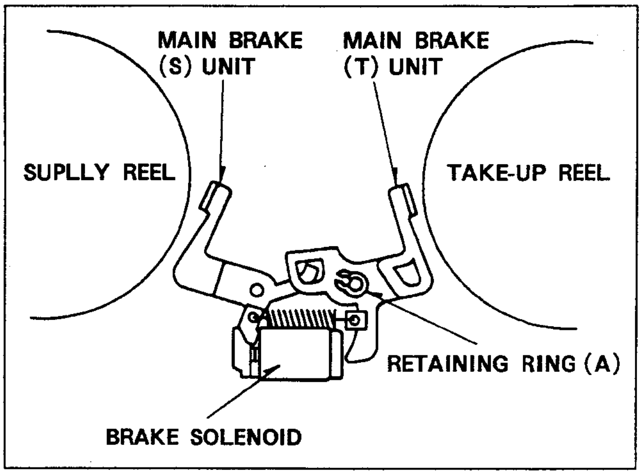

MAIN BRAKE (S) UNIT
MAIN BRAKE (T) UNIT
SUPLLY REEL
TAKE-UP REEL
RETAINING RING (A)
BRAKE SOLENOID

Figure M19

4. The new Main Brake (S),(T) Unit can be reinstalled by reversing the removal procedure.

Note: When assembling the DD Reel Motor Unit, slide the Main Rod to far left side by rotating a Center Gear (Figure M19).

3-5-11. REPLACEMENT OF THE PRESSURE ROLLER UNIT

1. Place the deck in or EJECT mode.
2. Remove the Pinch Can Cap.
3. Remove the Pressure Roller Unit.

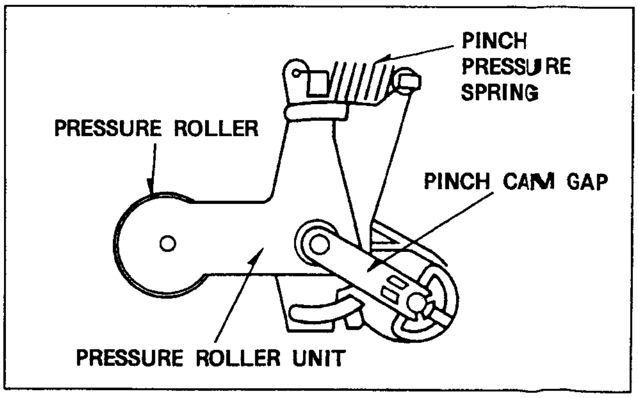

PINCH PRESSURE SPRING
PRESSURE ROLLER
PINCH CAM GAP
PRESSURE ROLLER UNIT

Figure M20

4. The new Pressure Roller Unit can be re-installed by reversing the removal procedure.

3-5-12. REPLACEMENT OF THE MODE SWITCH

1. Place the deck in the STOP mode.
2. Remove the Cassette Compartment Unit. (Refer to Disassembly Procedures).
3. Remove the Pinch Cam Cap and Pressure Roller Unit.
4. Unscrew the 2 screws and remove the Head Amp.
5. Remove the Pinch Cam.
6. Unscrew 2 screws (M) and remove the Loading Motor Base.
7. Unscrew a screw (N) and unsolder 5 of soldered portions.
8. Finally remove the Mode Switch.

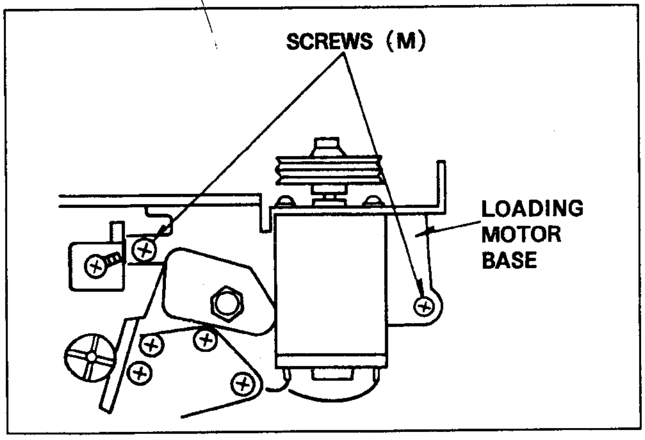

SCREWS (M)
LOADING MOTOR BASE

Figure M21-A

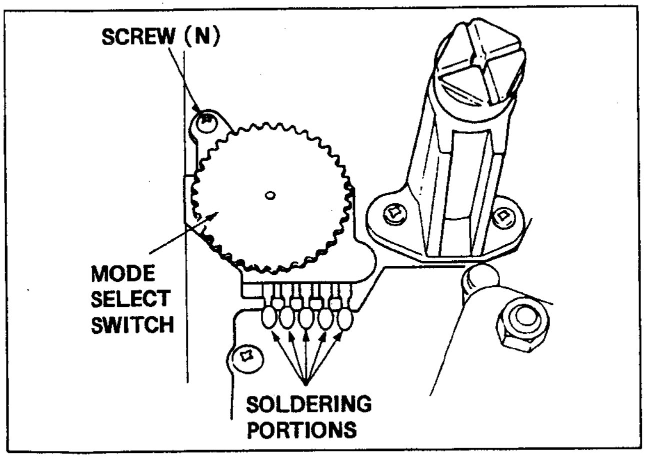

SCREW (N)
MODE SELECT SWITCH
SOLDERING PORTIONS

Figure M21-B

9. Install a Mode Switch and tighten screw (N), then solder 5 soldering portions.
10. Install the Pinch Cam and Pressure Roller Unit. (Refer to "Assembly Procedures of Pinch Cam & Pressure Roller Unit.")
11. Install the Loading Motor Base and tighten screw (M).
12. Install the Head Amp and tighten 2 screws.
13. Install the Cassette Compartment. (Refer to Reinstallation of Cassette Compartment.)

3-5-13. REPLACEMENT OF THE PINCH SOLENOID

1. Unscrew 2 screws (M) and remove the Loading Motor Base (Figure M21-A).
2. Unscrew 2 screws (O), Remove the Motor Pulley and Loading Motor (Figure M22-A).
3. Disconnect a connector (red) on the Motor Base C.B.A.
4. Unscrew 2 screws (P)(Figure M22-B) and remove the Pinch Solenoid.
5. Install the Pinch Solenoid on to the Motor Base so that the hole of the Motor Base should be the large hole of the Solenoid Base (Figure M22-C).
6. Tighten 2 screws (P).
7. Install a Loading Motor and tighten 2 screws (O).
8. Install the Loading Motor Base and tighten 2 screws (M)(Figure M21-A).

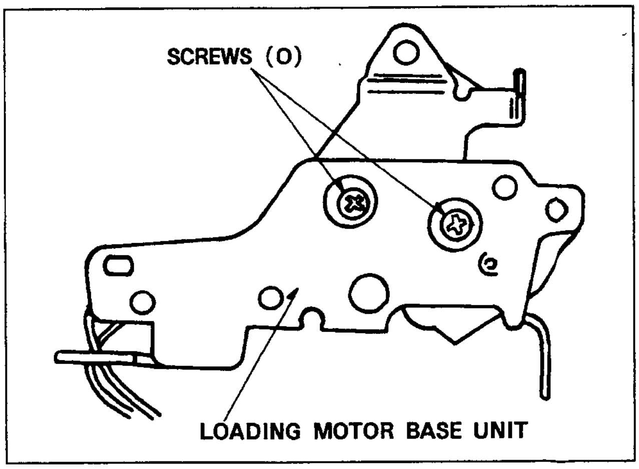

SCREWS (O)
LOADING MOTOR BASE UNIT

Figure M22-A

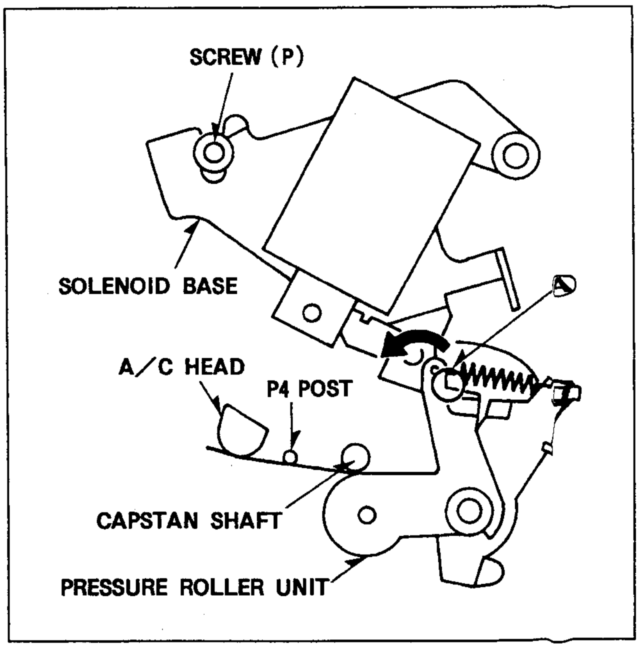

SCREW (P)
SOLENOID BASE
A/C HEAD
P4 POST
CAPSTAN SHAFT
PRESSURE ROLLER UNIT

Figure M22-B

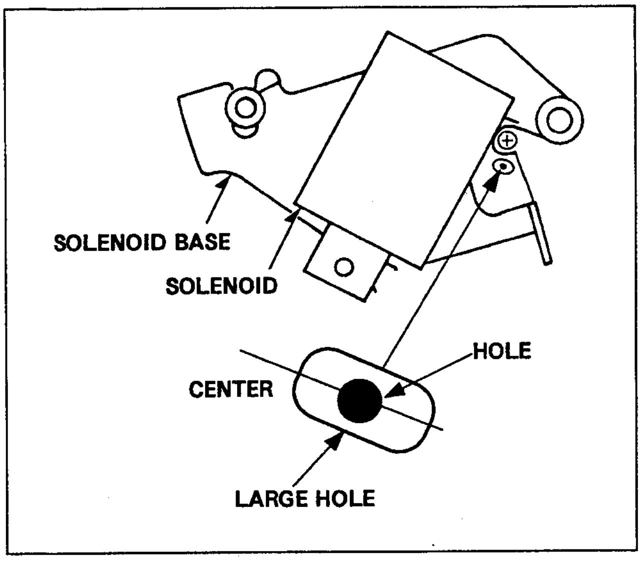

SOLENOID BASE
SOLENOID
HOLE
CENTER
LARGE HOLE

Figure M22-C

Note: Pressure Adjustment of the Pinch Roller (Refer to Mechanical Adjustment procedures) should be performed after completion of reinstalling the Pinch Solenoid.

3-5-14. REPLACEMENT OF THE HEAD CLEANING PAD

1. Remove a Cut Washer (N) and the Head Cleaning Pad Unit.
2. The Head Cleaning Pad Unit can be reinstalled by reversing the removal procedure.

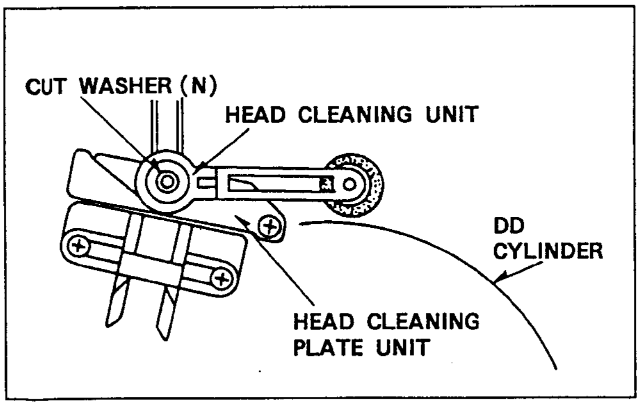

CUT WASHER (N)
HEAD CLEANING UNIT
DD CYLINDER
HEAD CLEANING PLATE UNIT

Figure M23

3-6. MECHANICAL ADJUSTMENT PROCEDURES

3-6-1. FLOW CHART OF TAPE INTERCHANGEABILITY ADJUSTMENT

AFTER RE-INSTALLING THE UPPER OR LOWER CYLINDER

↓

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT

↓

3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION

↓

3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION

AFTER RE-INSTALLING THE A/C HEAD

↓

3-6-5. ADJUSTMENT OF THE A/C HEAD
- A. COARSE ADJUSTMENT OF THE A/C HEAD HEIGHT
- B. COARSE ADJUSTMENT OF THE A/C HEAD TILT
- C. ADJUSTMENT OF THE A/C HEAD AZIMUTH
- D. ADJUSTMENT OF THE A/C HEAD TILT AND AZIMUTH
- E. ADJUSTMENT OF LOCK SCREW
- F. FINE ADJUSTMENT OF THE A/C HEAD HEIGHT

↓

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT

↓

3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION

↓

3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION

AFTER RE-INSTALLING THE INCLINED BASE (S)

↓

3-6-2. COARSE ADJUSTMENT OF THE P2, P3 POST HEIGHTS

↓

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT

AFTER RE-INSTALLING THE INCLINED BASE (T)

↓

3-6-2. COARSE ADJUSTMENT OF THE P2, P3 POST HEIGHTS

↓

3-6-8. ADJUSTMENT OF THE INCLINED BASE (T)

↓

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT

AFTER RE-INSTALLING THE PULL-OUT (P5) POST

↓

3-6-4. ADJUSTMENT OF THE PULL-OUT POST (P5) HEIGHT

AFTER RE-INSTALLING THE P2, P3 POST

↓

3-6-2. COARSE ADJUSTMENT OF THE P2, P3 POST HEIGHTS

↓

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT

3-6-2. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS (P2 and P3)

Note: The Tape Guide Posts have been precisely adjusted at the factory. Therefore, normally do not change the height of the P2 and P3 Posts.
To prevent the alignment tape from being damaged, use a normal cassette tape for this procedure.

<<TOOL>>

Post Adjustment Plate	;	VFK0191
Reel Table Height Gauge	;	VFK0190
Post Adjustment Screwdriver	;	VFK0329
Check Light	;	VFK0948
L Type Screwdriver	;	VFK0269

1. Remove the cassette compartment (Refer to Disassembly Procedures).
2. Place the Post Adjustment Plate over the reel tables. Confirm that the Post Adjustment Plate is firmly seated as shown in Figure M25-A.

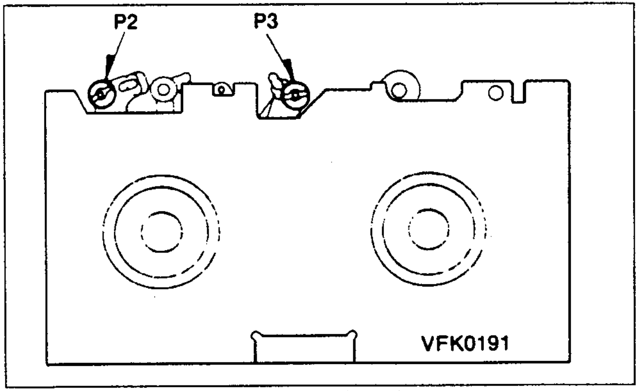


Figure M25-A

3. Lower 2 tape guide posts (P2 and P3) by turning the Post Adjustment screwdriver so that the condition of post becomes as shown in Figure M25-B. That is the lower edge of Tape guide should be lower than surface of Adjustment Plate.

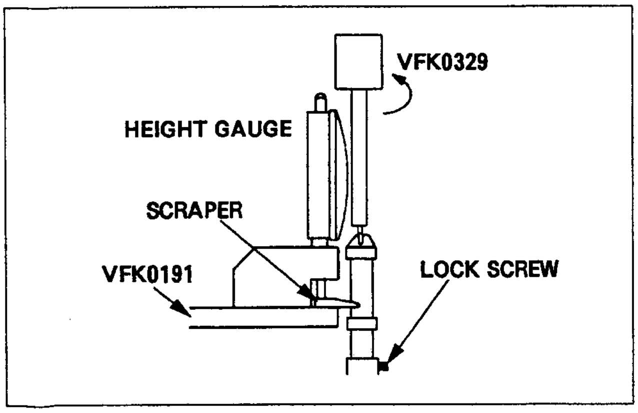


Figure M25-B

Note: Before turning P2 and P3 slightly loosen the Lock Screw using the L Type Screwdriver.

4. Place the scraper of Reel Table height Gauge as shown in Figure M25-C.
Set the gauge to zero, then raise the post slowly until the lower tape guide just touches the bottom of the scraper. Use the gauge to determine the exact point at which the lower tape guide touches the scraper.

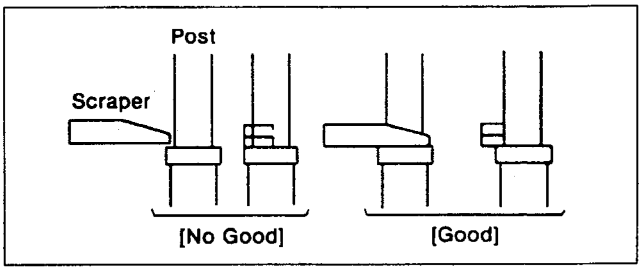


Figure M25-C

5. After the adjustment, install the cassette compartment referring to Reinstallation of cassette compartment.
6. Play back the beginning portion of NV-T160 cassette tape, and confirm that tape travel as shown in Figure M25-D.

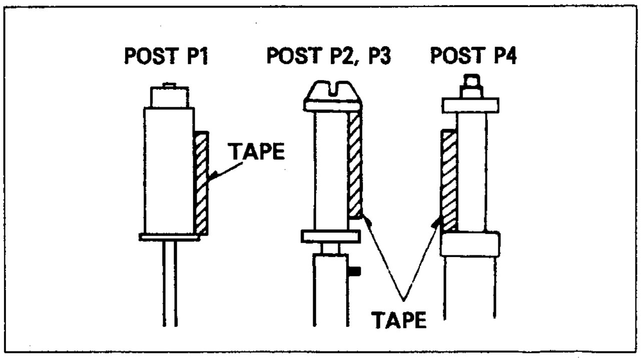


Figure M25-D

7. Make sure that the edges of the tape are not curling or waving at the bottom or top end of the posts P2, P3 by using the Check Light.
8. If there are waving or filling at the lower or upper edge of the P2 and P3 posts, readjust the heights of P2 and P3 Posts correctly as shown in Figure M25-E.

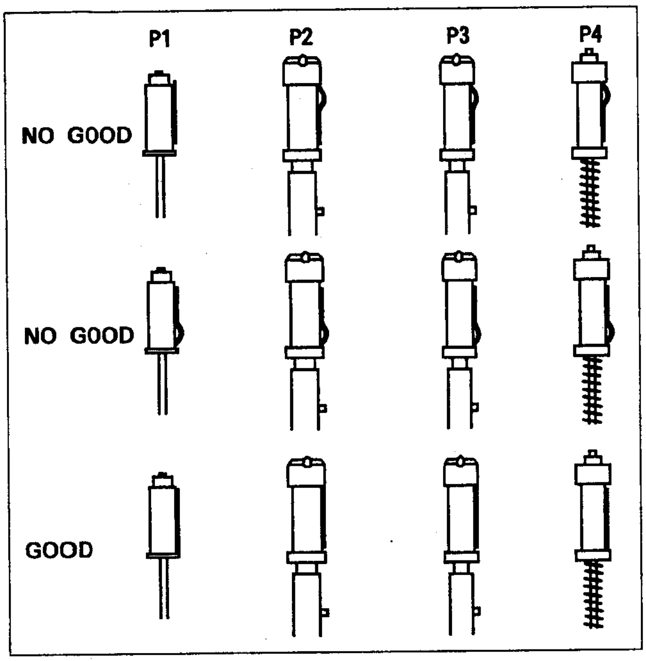


Figure M25-E

9. And confirm that the tape runs along the Cylinder Lead Correctly.

3-6-3. FINE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT (P2 and P3)(LINEARITY)

<<TOOL>>
Alignment Tape ; VFM8080HQFP
Post Adjustment Screwdriver ; VFK0329

Note: Before playing back the alignment tape playback a normal cassette tape and confirm correct transport.

1. Connect the oscilloscope to the TP6 of the Video 1 C.B.A. (Video RF Envelope and the head switching pulse as a triggering signal.
2. Play back the 2-nd portion (Monoscope 2) of the alignment tape (VFM8080HQFP).

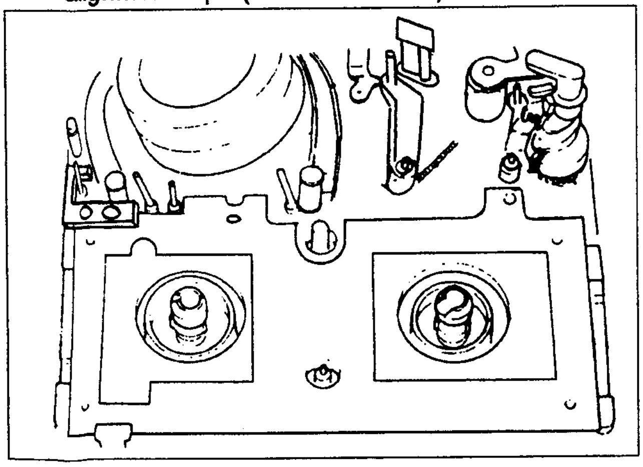


Figure M26-A

3. Press the tracking control button on the front panel and adjust for maximum.
4. If the RF envelope appears like example A or B in Figure M26-B then adjustment of the tape guide post (P2 ; Entrance) is necessary.
5. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Figure M26-B.

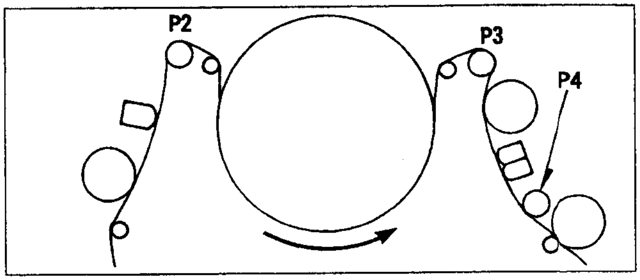


Figure M26-B

6. If the RF envelope appears like example D or E in Figure M39, then adjustment of the tape guide post (P3 ; Exit) is necessary.
7. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Figure M39.

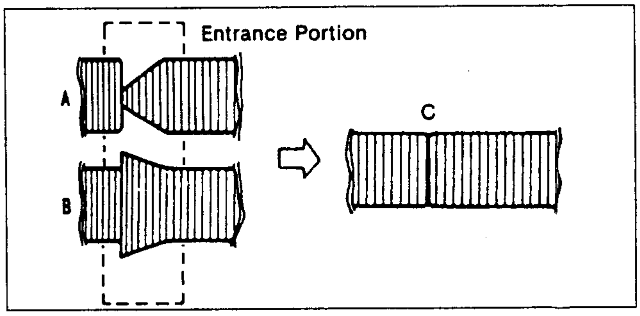


Figure M26-C

8. The output envelope should vary nearly parallel with other condition as shown in Figure M26-D.

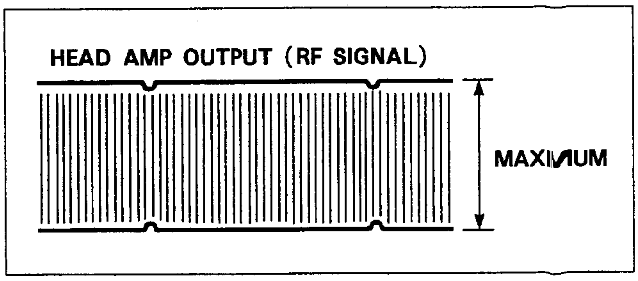


Figure M26-D

9. If the RF envelope does not meet these specification,
   V1/V0 ≥ 0.7
   V2/V0 ≥ 0.8
   V3/V0 ≥ 0.7
   then repeat steps 4-9 again.

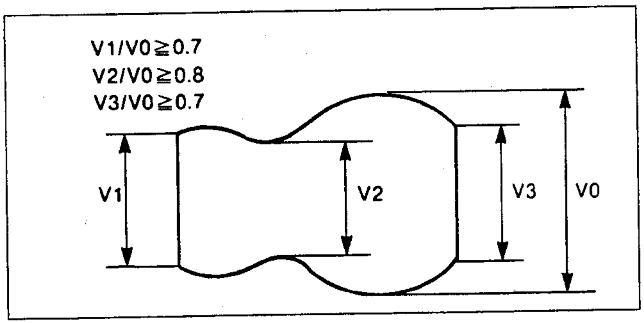

V1/V0≧0.7
V2/V0≧0.8
V3/V0≧0.7
V1
V2
V3
V0

Figure M26-E

3-6-4. ADJUSTMENT OF THE PULL-OUT POST (P5) HEIGHT

<<TOOL>>
Post Adjustment ; VFK0191
Reel Table Height Gauge ; VFK0190
Nut Driver ; Purchase locally

<<SPEC>>
0.03mm ± 0.01mm

Note: Unless the replacement or adjustment this post is required, the adjustment nut should not be turned.

1. Remove the cassette compartment (Refer to Disassembly procedures).
2. Place the Post Adjustment Plate over the reel tables.
3. Turn the Worm Shaft counterclockwise (loading direction) until the mechanical condition becomes as shown in Figure M27-A.

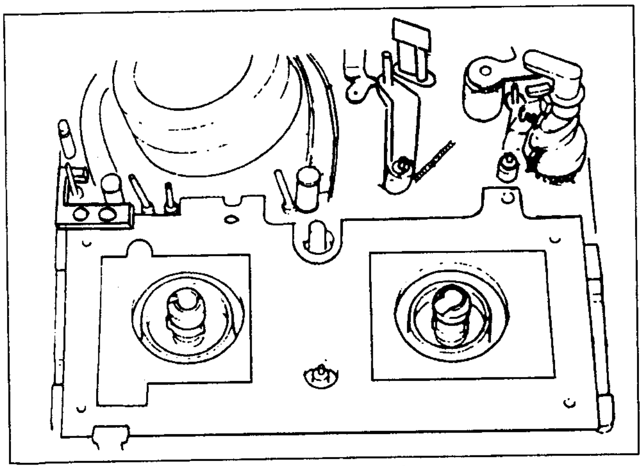


Figure M27-A

4. Place the Reel Table Height Gauge on the Post Adjustment Plate and set the gauge to zero 0 as shown in Figure M27-B.

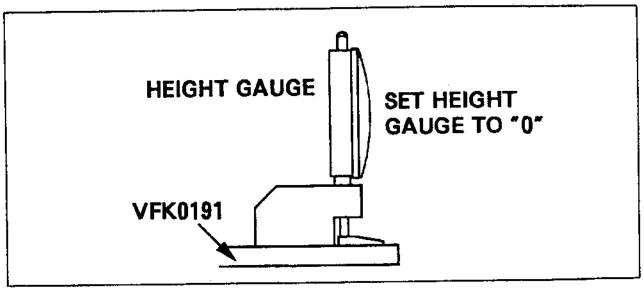

HEIGHT GAUGE
SET HEIGHT GAUGE TO "0"
VFK0191

Figure M27-B

5. Place the Reel Table Height Gauge as shown in Figure M27-C and turn the nut slowly until the gauge reads.

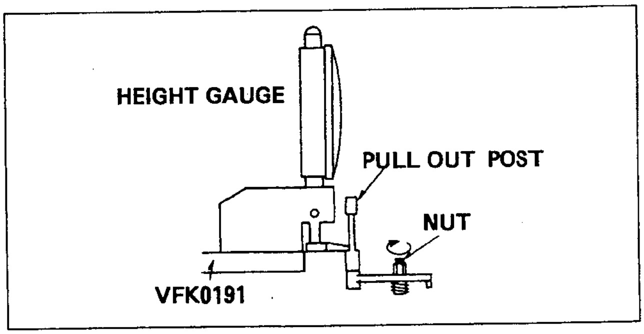

HEIGHT GAUGE
PULL OUT POST
NUT
VFK0191

Figure M27-C

6. After the adjustment, install the cassette compartment (Refer to reinstallation of Cassette Compartment).
7. Play back a normal cassette tape on Review search mode, and make sure that the edges of the tape are not curling or waving at the bottom end of the P4 post by using the Check Light as shown in Figure M27-D.

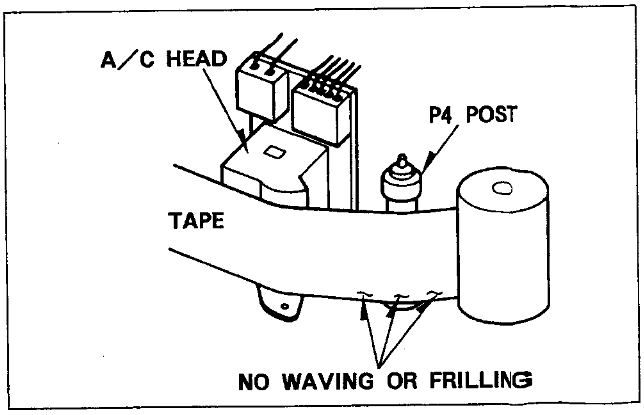

A/C HEAD
P4 POST
TAPE
NO WAVING OR FRILLING

Figure M27-D

Note: There is easy method to check Waving of Filling. If there is Waving or Filling in the lower edge, the white black pattern which is reflected on the tape will curve or not linear as shown in Figure M27-E.

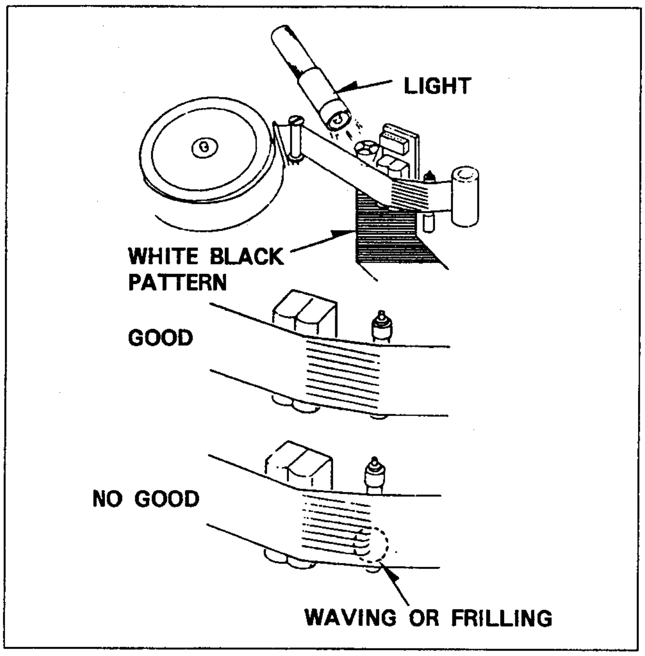

LIGHT
WHITE BLACK PATTERN
GOOD
NO GOOD
WAVING OR FRILLING

Figure M27-E

3-6-5. ADJUSTMENT OF A/C HEAD

A. COARSE ADJUSTMENT OF THE A/C HEAD HEIGHT

Note: This procedure should be performed only when the A/C Head is replaced.

<<TOOL>>
Check Light ; VFK0948
Nut Driver ; Purchase locally
VHS video Tape

1. With the tape running, look at the lower edge of the control head by using the check light.
2. Adjust the Nut (A) as shown in Figure M28-A by turning the Nut (A) clockwise to lower the head, and counterclockwise to raise it.

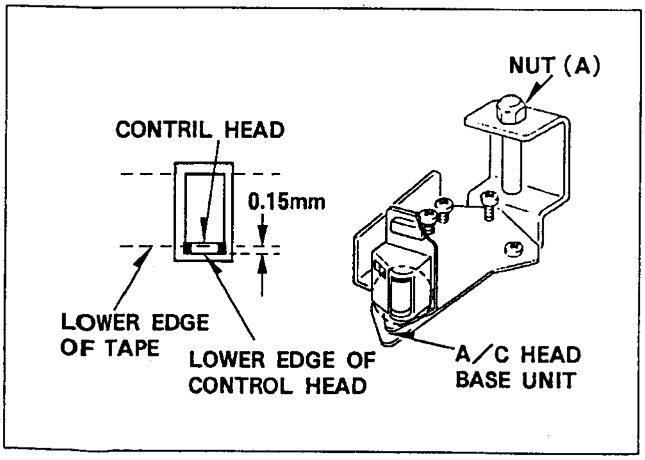

NUT (A)
CONTRIL HEAD
0.15mm
LOWER EDGE OF TAPE
LOWER EDGE OF CONTROL HEAD
A/C HEAD BASE UNIT

Figure M28-A

B. COARSE ADJUSTMENT OF THE A/C HEAD TILT

Note: This procedure should performed only when the A/C Head is replaced or posts heights are readjusted.

<<TOOL>>
Alignment Tape ; VFM8080HQFP
Check Light ; VFK0948
Screwdriver (+) ; Purchase locally
VHS Vide Tape

1. Play back a VHS video tape which the amount of tape winding of a Take up Reel, Turn a screw (B) to clockwise until waving or Filling appears in the Lower edge of P4 post as Figure M28-B.

Note: There is easy method to check waving or Filling if there is waving or Filling in the lower edge. ZEBRA pattern which is reflected on the tape will curve or not linear (Figure M27-E).

2. Turn the screw (B) to counter-clockwise until waving or filling do not appear in the in the lower edge of P4 post.

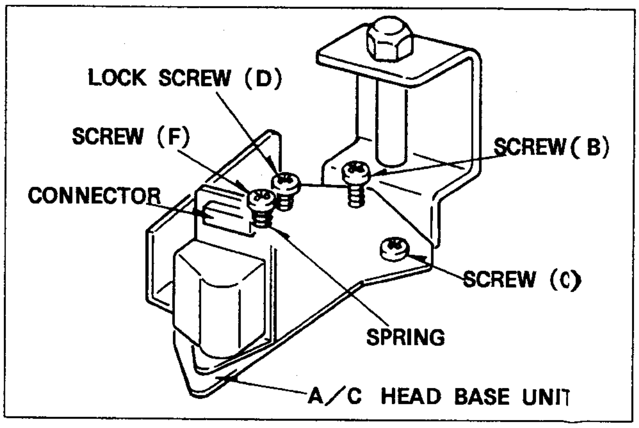

LOCK SCREW (D)
SCREW (F)
CONNECTOR
SCREW(B)
SCREW (C)
SPRING
A/C HEAD BASE UNIT

Figure M28-B

C. ADJUSTMENT OF A/C HEAD AZIMUTH

1. Connect the scope CH1 to test point (Normal Audio out put CH1) and the scope CH2 to test point (Normal Audio output CH2) on the Rear Jack.
2. Play back the 2-nd portion (Normal Audio 10KHz) of the alignment tape (VFM8080HQFP).
3. Adjust the screw (C) so that these phases of both channels match as shown in Figure M28-C.

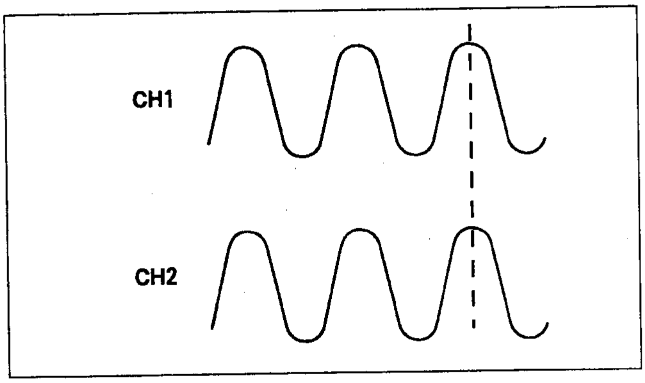


Figure M28-C

D. TILT and AZIMUTH ADJUSTMENT OF A/C HEAD

1. Adjust the screw (C) and (B) so that CH1 and CH2 output levels become maximum, these phase of both channels much at the same time (Figure M28-D). During this adjustment the Lock screw (D) dose not touch the A/C Head Base as shown in Figures M28-E.

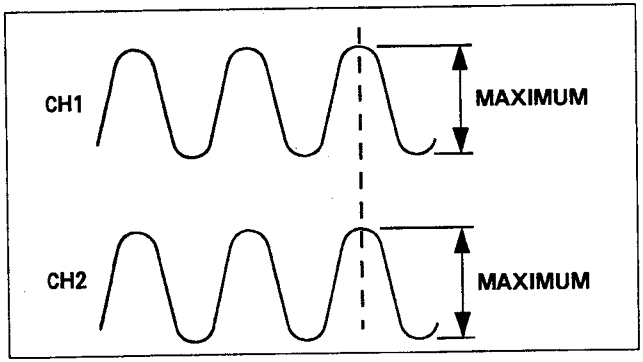


Figure M28-D

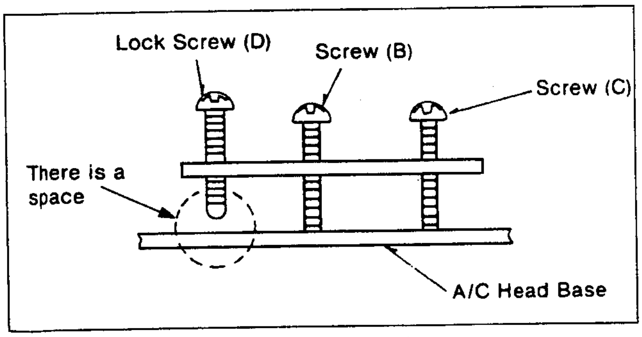

Lock Screw (D)
Screw (B)
Screw (C)
There is a space
A/C Head Base

Figure M28-E

E. ADJUSTMENT OF LOCK SCREW

1. Turn the screw (C) to clockwise so that the difference of phase of both channels become 180 degrees as shown in Figure M28-F.
2. Tighten the Lock screw (D) so that these phase of both channels match as shown in Figure M28-F.

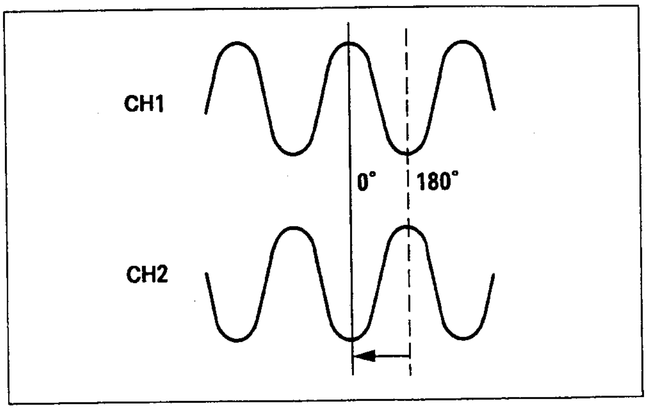


Figure M28-F

F. FINE ADJUSTMENT OF A/C HEAD HEIGHT

Note: Before this adjustment Coarse Adjustment of the A/C Head Height should be performed.

<<TOOL>>
Alignment Tape ; VFM8080HQFP
Nut Driver ; Purchase locally

1. Connect a scope CH1 to test point (Normal Audio output CH1) and the scope CH2 to test point (Normal Audio output CH2) on the Rear Jack C.B.A.
2. Play back the 2-nd portion (Normal Audio 10kHz) of the Alignment Tape (VFM8080HQFP).
3. Adjust the Nut (A)(Figure M28-A) so that the CH2 output level becomes maximum as shown in Figure M28-H.

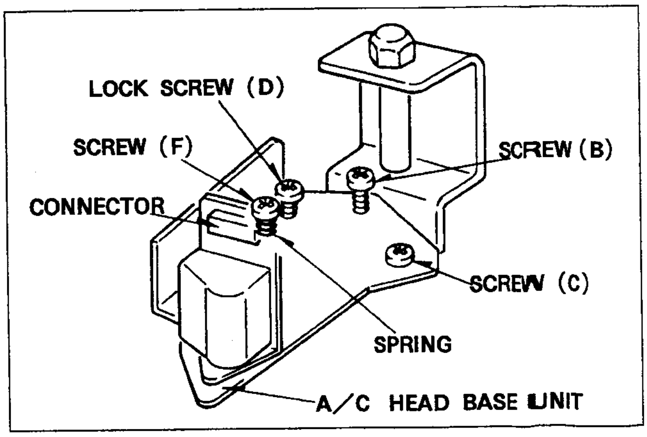

LOCK SCREW (D)
SCREW (F)
CONNECTOR
SCREW (B)
SCREW (C)
SPRING
A/C HEAD BASE UNIT

Figure M28-G

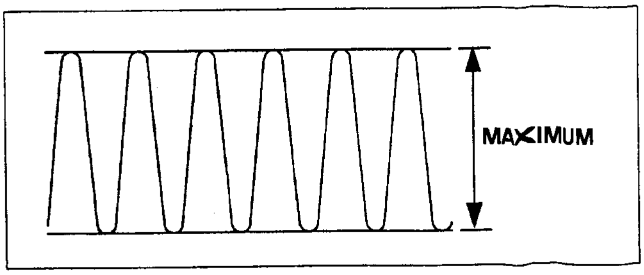


Figure M28-H

3-6-6. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

Note: This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

<<TOOL>>

H-Position Adjustment Screwdriver	;	VFK0328
Alignment Tape	;	VFM8080HQFP

1. Connect a scope CH1 to Video RF Test Terminal (TP6 of the Video 1 C.B.A.) and a scope CH2 to Normal Audio CH2 output on the Rear Jack.
2. Play back the 4-the position (Monoscope 3 and Audio/Every 10-the field is skipped) of the Alignment tape VFM8080HQFP.
3. Adjust the A/C head horizontal position screw so that the phase of audio drop out and video RF envelope drop-out becomes the same as shown in Figure M29

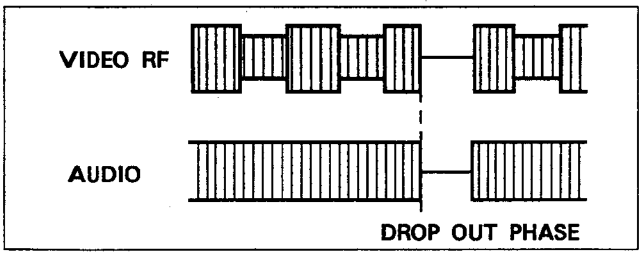


Figure M29

Note: After completion the fine adjustment of the A/C head horizontal position, the phase of Audio drop-out and Video RF envelope drop-out may be changed slightly.

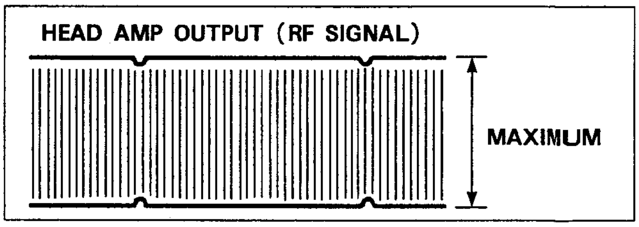
3-6-7. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

Note: This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

<<TOOL>>

H-Position Adjustment Screwdriver	;	VFK0328
Alignment Tape	;	VFM8080HQFP

1. Press the tracking control button "+" and "-" at same time to the center position.
2. Connect a oscilloscope to Video RF test Terminal.
3. Play back the 2-nd portion (Monoscope 2) of the alignment tape (VFM8080HQFP).
4. Adjust the Horizontal Position Screw (Figure M29) of A/C head so that the RF signal becomes maximum level as shown in Figure M30.



Fiugre M30

3-6-8. ADJUSTMENT OF INCLINED BASE (T)

<<TOOL>>

Check Light	;	VFM0948
Screwdriver (+)	;	Purchase
VHS Video Tape		

1. Play back the beginning portion of 120 minute normal cassette tape and confirm that waving or filling of P3 post is as shown in Figure M31-A

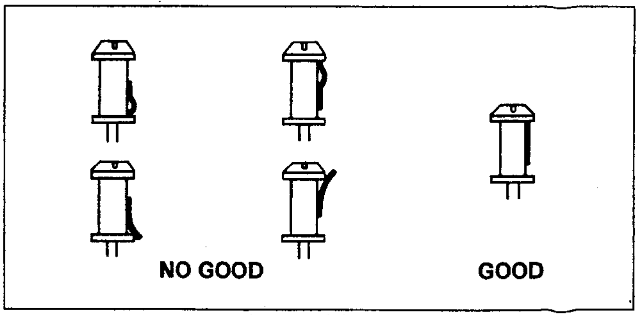


Figure M31-A

2. If there are waving at the lower and upper edge of the P3 post, Adjustment the inclined base of P3 post as shown in Figure M31-B.

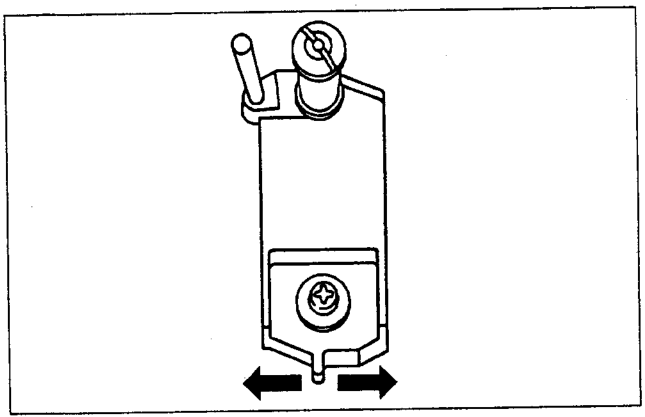


Figure M31-B

[When the inclined base is adjust to an arrow direction (B) tape becomes to lower edge.]

3. Confirm that tape position P3 post is upper edge and then tighten screw as shown in Figure M31-B.
4. Confirm that waving is occurred between upper side of P3 post and A/C head. If there is waving adjust the step 2.

Note: After adjust inclined base tapeinterchangeability and A/C head adjustment must be required.

3-6-9. ADJUSTMENT OF THRUST GAP

1. Turn the thrust adjustment screw clockwise to until the capstan rotor just separate from the capstan stator whit rotating the capstan rotor by hand.
2. Turn the thrust adjustment screw clockwise to 180 degrees from paint at step 1.
3. Set the 2 oil seal to edge of the capstan housing as shown in Figure M32.

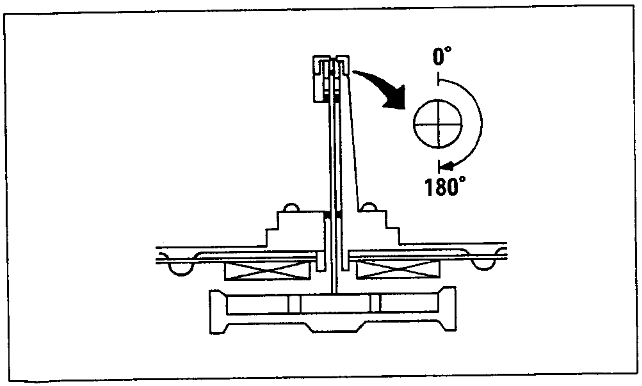


Figure M32

3-6-10. ADJUSTMENT OF FG GAP

<<TOOL>>
Fine Adj. screwdriver : VFK0330
Screwdriver : Porchase loclly

<<SPEC>> 0.16mm ± 0.04mm

1. Loosen screw (Q) and set the Fine Adjustment screw driver n the hole on the Capstan Stator Unit.
2. Adjust the gap between FG head and the Capstan Stator unit.
3. After adjustment tighten a screw (Q).

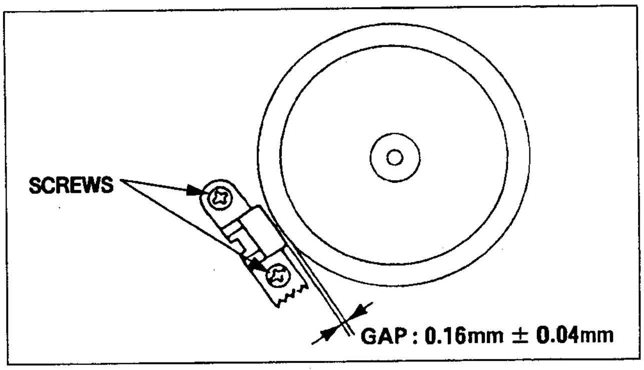


Figure M33-A

Note: After adjust FG head gap, FG output level confirmation must be required. Do not touch the surface of rotor and keep any magnetizable material away.

CONFIRMATION OF FG OUTPUT LEVEL

1. Connect a oscilloscope to TP8009 (CAP FG output) on the Video 3 C.B.A.
2. Confirm that FG output level is within specification during PLAY/REC or PLAY mode.
3. If FG output level is out of specification. Readjust the step 1 ~ 3 of FG GAP Adjustment.

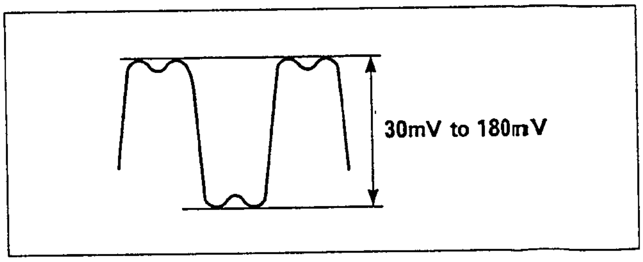


Figure M33-B

3-6-11. MEASUREMENT AND ADJUSTMENT OF BACK TENSION

<<TOOL>>
Back Tension Meter ; VFK0132
VHS Cassette Tape(120min. tape except S-VHS tape)

A. FWD TENSION ADJUSTMENT

<<SPEC>>
23g ~ 27g

1. Play back the cassette tape from the beginning and wait until the tape movement get the stabilization (for approx. 10 to 20 seconds).
2. Pull the Impedance Roller in the direction indicated the arrow in Figure M34-A secure it with a piece of adhesive tape.
3. Insert the Back Tension Meter into the path of a tape, and measure the back tension.

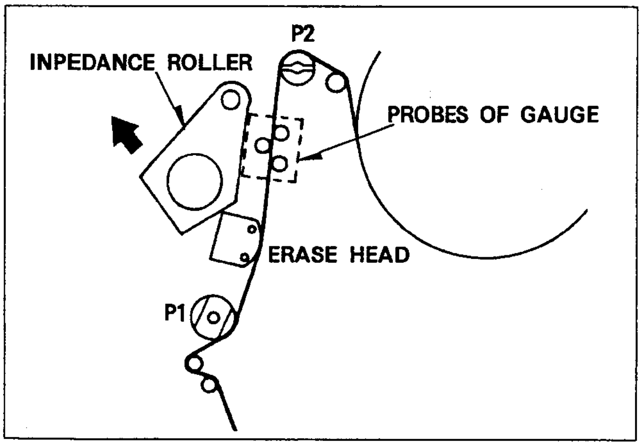


Figure M34-A Measurement of Back Tension

4. If it is out of specification, replace the Tension spring.

B. REV TENSION ADJUSTMENT

<<SPEC>>
30g ~ 60g

1. Play back the cassette tape on SP Reverse Play mode from the beginning and wait until the tape movement get the stabilization (for approx. 10 to 20 seconds).
2. Pull the Impedance Roller in the direction indicated by the arrow in Figure M34-B secure it with a piece of adhesive tape.
3. Insert the Back Tension Meter into the path of a tape, and measure the back tension.
4. If it is out of specification, replace the Tension spring.

Note: While measuring, make sure that the three probes of the meter are all in good contact with the tape.
As the tension meter is very sensitive, we recommend taking 3 separate readings.

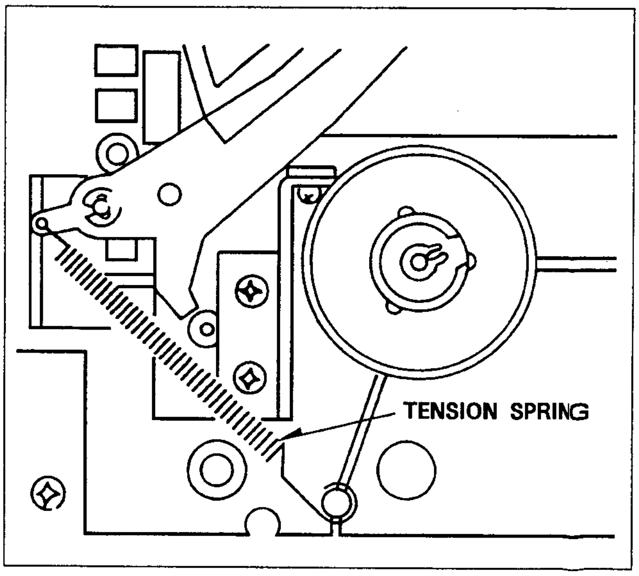


Figure M34-B

3-6-12. HEIGHT ADJUSTMENT OF THE REEL TABLES

<<TOOL>>
Post Adjustment Plate ; VFK0191
Reel Table Height Gauge ; VFK0190

<<SPEC>>
0 - 0.15mm

1. Remove the cassette compartment.
2. Place the post Adjustment Plate on the reel tables.
3. Place the Reel Table Height Gauge on the plate so that the scraper of the gauge touches the cut-out portion of the plate, then set the gauge to zero 0 as shown in Figure M35-A.

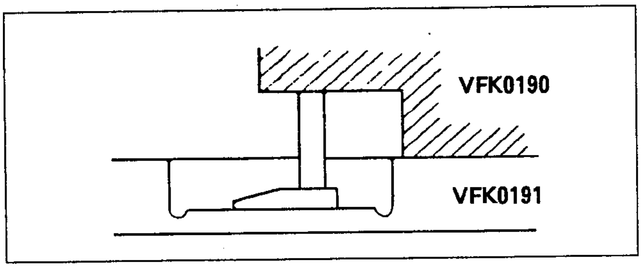


Figure M35-A

4. Measure the height of the top surface of either Reel table and note the difference in height from the plate cut-out (Figure M35-A and M35-B). Repeat this procedures for the other Reel Table.

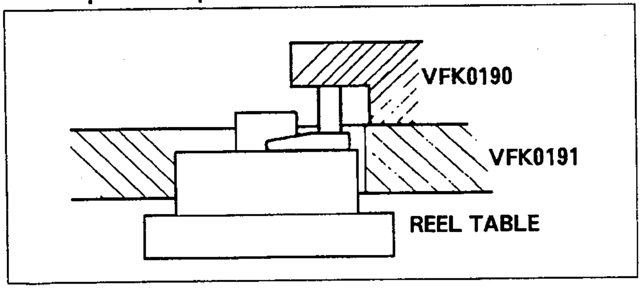


Figure M35-B

5. If the difference of Supply Reel table is more than 0.15mm higher or lower, replace the Supply Reel table. When the difference of Take Up Reel table is more than 0.15mm higher or lower, adjust nut (A)(Figure M35-C) so that measurement becomes the spec. If you can not adjust to the spec., replace Take Up Reel table.

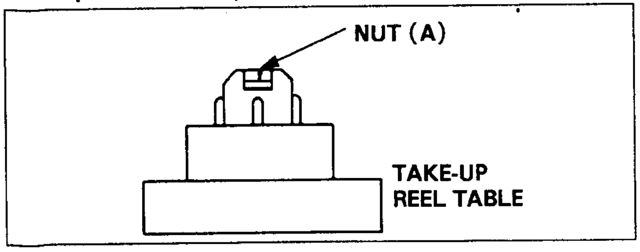


Figure M35-C

Note: When replacing the tables, the DD Reel Unit needs to be removed from the chassis. Remove 6 screws and carefully lift it out as shown in Figure M35-D.

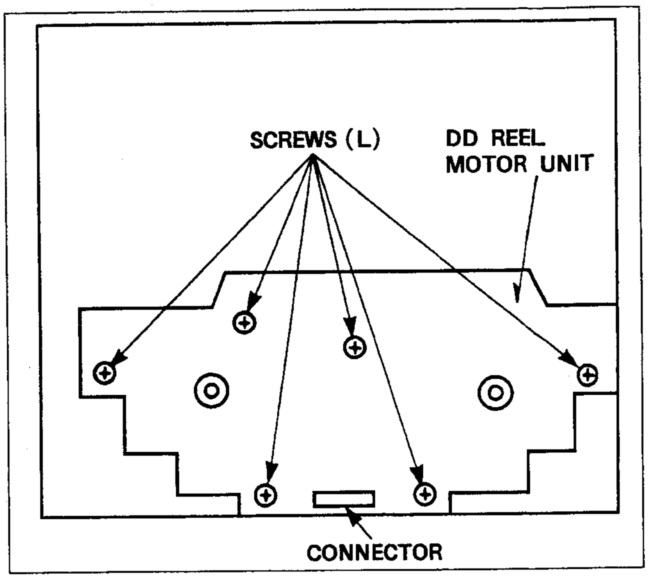


Figure M35-D Bottom View of DD Reel Unit

Note: When assembling the DD Reel Unit, slide a Main Rod to far left side by rotating the Center Gear, and then screw the 6 screws.

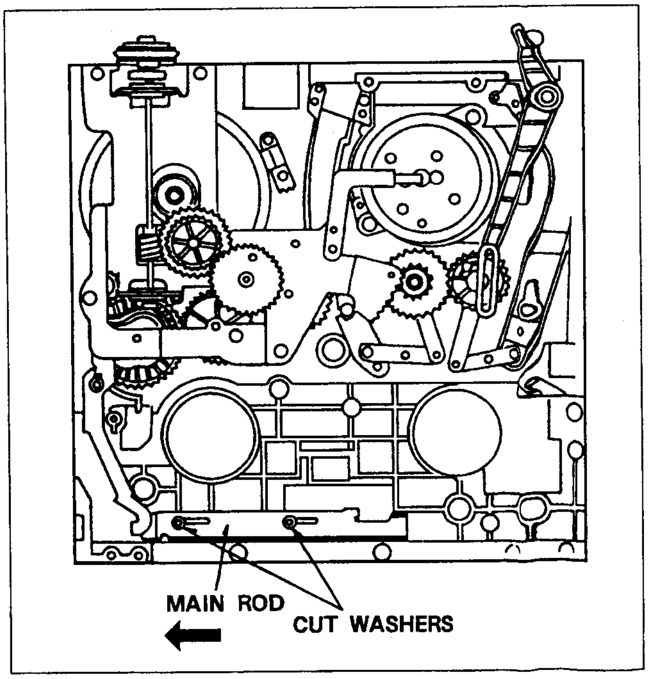


Figure M35-E

3-6-13. MEASUREMENT AND ADJUSTMENT OF THE BRAKE TORQUE

<<TOOL>>
Torque Gauge ; VFK0133
Adaptor for Gauge ; VFK0134

1. Remove the top cover and the cassette compartment.
2. Attach the adapter to the torque gauge and place the deck in STOP mode (Sub loading mode).
3. Place the torque gauge on the reel table as shown in Figure M36-A. The weight of the gauge should not rest on the reel table.
4. Turn the torque gauge in the direction indicated in Figure M36-B until the brake begins slipping and read the gauge.

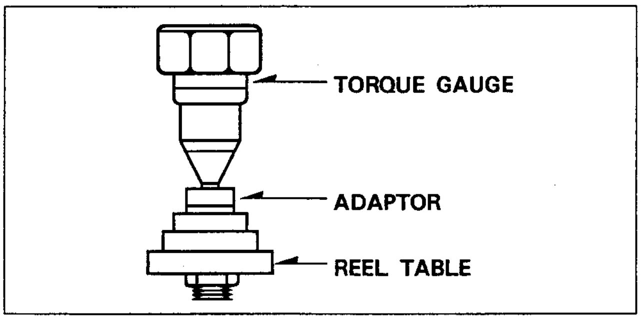
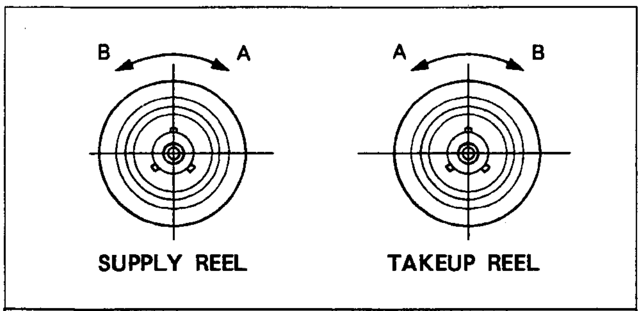


Figure M36-A Measuring Method



	A	B
Takeup	more than 550g-cm	more than 50g-cm
Supply		more than 50g-cm

Figure M36-B Specification of Btake Torque

5. If it is out of specification, replace the Brake Spring.

Note: If the proper brake torque cannot be obtained by replacing the Brake Spring, clean the braking surface of the reel table with a soft cloth and re-measure the brake torque. If its still out of specification, replace the Main Brake (S) or (T) Unit.

3-6-14. PRESSING FORCE CONFIRMATION OF PRESSURE ROLLER UNIT

<<TOOL>>
Fan Type Tension Gauge ; VFK66
VHS 120min, Cassette Tape

<<SPEC>>
1050g ± 230g

1. Remove the Cassette Compartment.
2. Play back the end portion of VHS (120min.) tape.
3. Set the Fan Type Tension Gauge to the part (A) of Pinch Roller Unit.
4. Press the Arm with the Gauge, in the direction indicated by the arrow as show in Figure M37.
5. Adjust the Solenoid Base so that the reading of the Tension Gauge is 1050g ± 230g at the moment of the tape running stop.
6. If it is out of specification, replace the Tension spring.

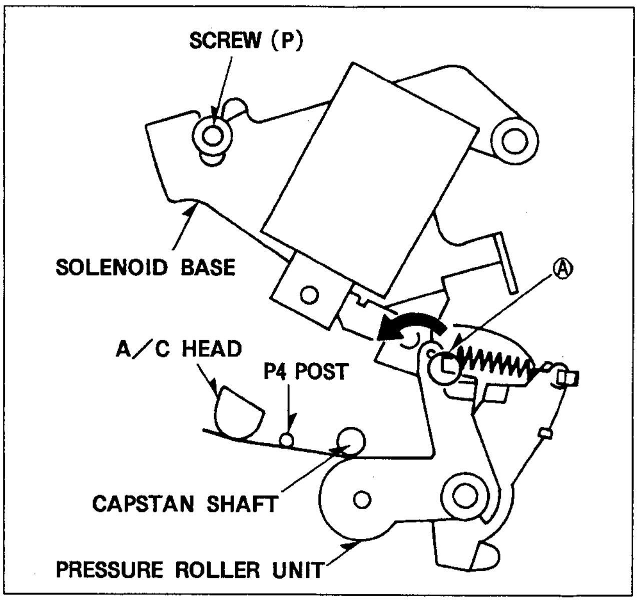


Figure M37

3-6-15. ADJUSTMENT OF REV TENSION SENSOR POSITION

<<TOOL>>

Tension Sensor Adj. Fixture	;	VFK0806
Tension Post Adj. Plate	;	VFK0236
Fine Adj. Screwdriver	;	VFK0330
Digital Volt Meter	;	Purchase locally

<<SPEC>>

2.3V ~ 2.7V

Note: Assemble a Tension Sensor Adjustment Fixture (VFK0806) and a Tension Post Adj. Plate (VFK0236) as shown in Figure M38-A.

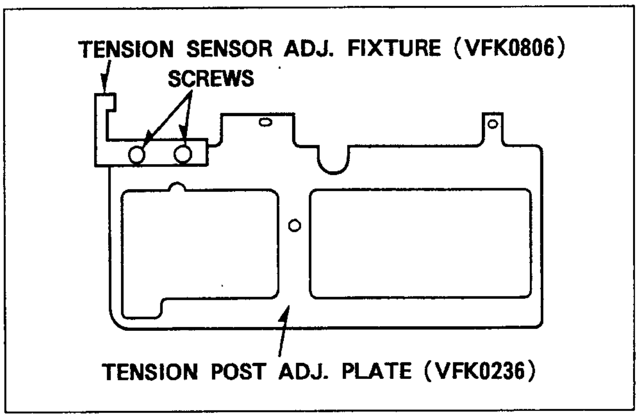

TENSION SENSOR ADJ. FIXTURE (VFK0806)
SCREWS
TENSION POST ADJ. PLATE (VFK0236)

Figure M38-A

1. Remove the Top Plate and Cassette Holder Unit. (refer to Disassemble Procedures)
2. Disconnect the 4pin and 2pin flat wire to the pin3 and 4 of the connector P1508.
3. Connect two wires of 4pin flat wire to the pin3and 4 of the connector P1508.
4. Push the Sub Wiper Arm (R) to direction of Cassette loading.
   Then the Sub Wiper Arm (R) goes down it self and mode of machine change to STOP.
5. Turn the Power switch off.
6. Remove the Cassette Compartment (refer to Disassembly Procedures).
7. Connect the V.T.V.M. of D.V.M. to TP8008 on the Video 3 C.B.A.
8. Place the Tension Post Position Adjustment Plate with the Fixture over the reel tables as shown in Figure M38-B.

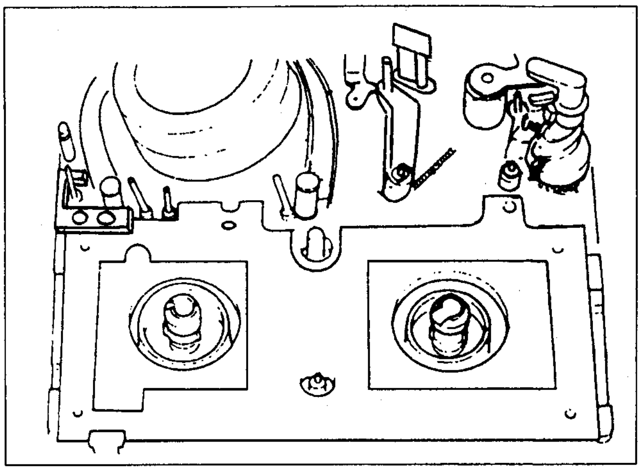


Figure M38-B

9. Turn the Power switch on.
10. Slightly loosen 2 screws (C). Insert a Fine Adj. Screwdriver in the hole (D)(Figure M38-C).

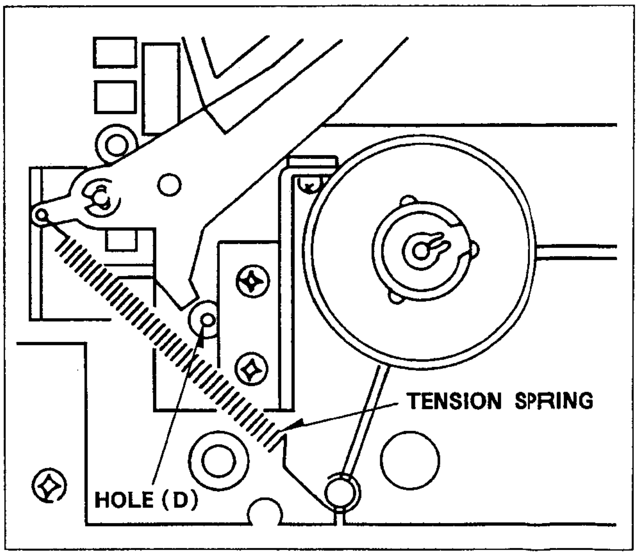


Figure M38-C

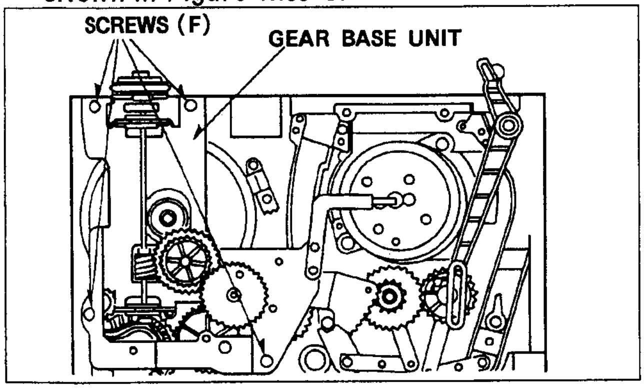
11. Press the PLAY button.
12. Adjust the Rev Sensor Position so that measurement becomes D.C. 2.3V ~ 2.7V.
13. Tighten the 2 Screws (C).
14. Remove the Tension Sensor Fixture.
15. Reinstall the Cassette Compartment.
16. Confirm Playback picture (Rev Playback mode, Playback mode etc.)

3-7. ASSEMBLY AND ADJUSTMENT PROCEDURES OF MECHANISM

The mechanism of this model is mostly engaged to the System Control Circuit, through the mode select switch. Therefore the relation between the mode select switch and the cam gear decides all further mechanical movement of the mechanical parts such as levers, gears, rollers and so on. If these parts are not fixed properly, the unit will be unloaded or compulsorily stopped. And it will result being damaged at any mechanical or electrical parts. The overall mechanical condition (alignment) of bottom and top view are shown in Figure M39-A and Figure M39-B. This mechanical adjustment is performed in the STOP mode.

3-7-1. CONFIRMATION OF ALIGNMENT CONDITION

1. Remove the Loading Belt.
2. Unscrew 4 screws (F) and remove the Gear Base Unit. (Figure M39-A)
3. Turn the Center Gear to counter-clockwise until 2 big holes of Center Gear align with 2 big holes of Retainer Gear and Ring Gear and Chassis as shown in Figure M39-C.
4. Identification hole on the Mode Select Switch at 6 oclock position and aligned with small hole on Pinch Cam as shown in Figure M39-B.
5. P5 Arm is completely loading position and the Inclined Base (S) and (T) are completely unloading position.
6. Small hole on Sub Cam Gear should align with small hole on the Connection Gear and rectangular mark on the Connection Gear should be at a 3 oclock position.
7. Pressure Roller Unit is UP position.


SCREWS (F)
GEAR BASE UNIT

Fiugre M39-A

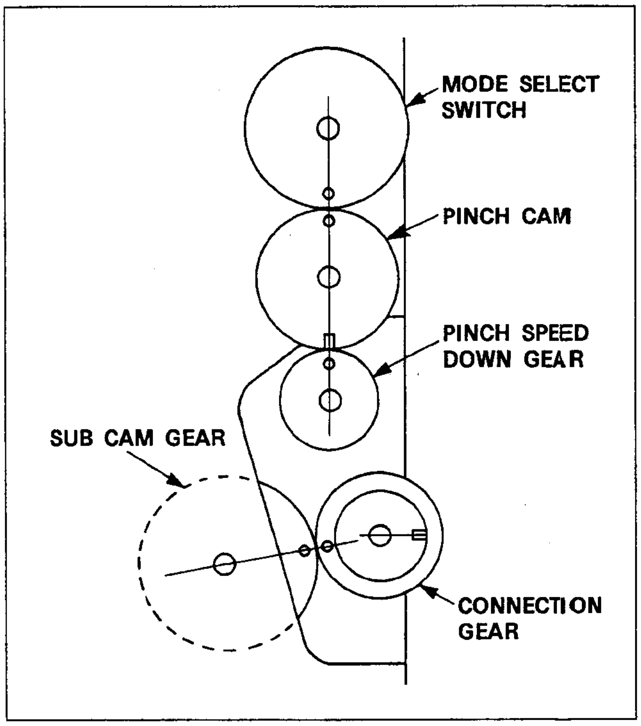

MODE SELECT SWITCH
PINCH CAM
PINCH SPEED DOWN GEAR
SUB CAM GEAR
CONNECTION GEAR

Figure M39-B Top View of Overall IQ-Mechanical Condition

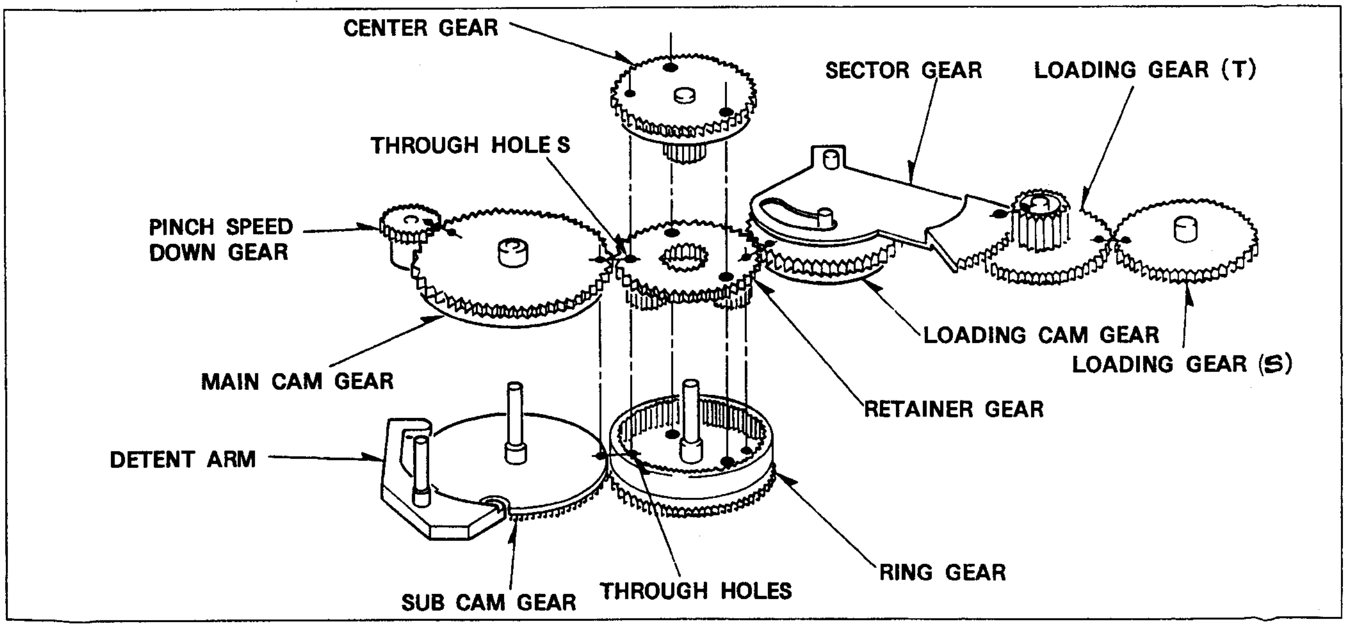

CENTER GEAR
SECTOR GEAR
LOADING GEAR (T)
THROUGH HOLE S
PINCH SPEED DOWN GEAR
LOADING CAM GEAR
LOADING GEAR (S)
MAIN CAM GEAR
RETAINER GEAR
DETENT ARM
RING GEAR
SUB CAM GEAR
THROUGH HOLES

Figure M39-C Bottom View of Overall Mechanical Condition

3-7-2. ASSEMBLY PROCEDURES OF SUB CAM GEAR RING GEAR AND DETENT ARM

1. Install the Ring Gear so that the two holes on the Ring Gear align with the two holes on the chassis as shown in Figure M40.
2. Install the Sub Cam Gear so that the large hole on Sub Cam Gear aligns with the hole on chassis.
   Also the small hole (located just outside of large hole) on Sub Cam Gear should align with the hole on Ring Gear as shown in Figure M40.
3. Confirm that the small hole on Sub Cam Gear is aligned with the small hole on Connection Gear as shown in Figure M39-B (In case of the Connection Gear is already installed).
4. Install the Detent Arm and make sure Detent Arm seats perfectly in detent of Sub Cam Gear as shown in Figure M40.

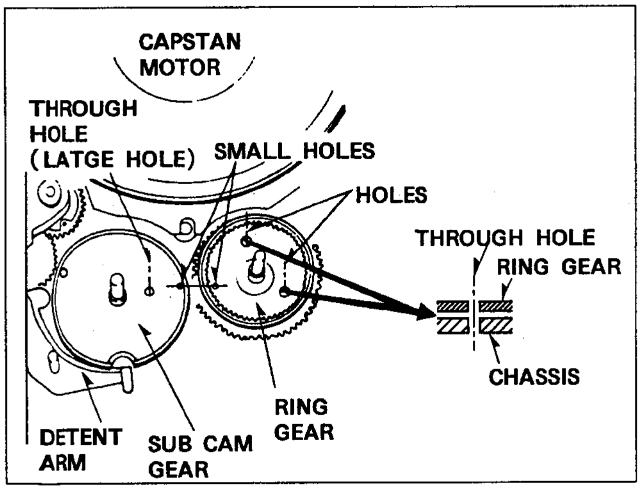

CAPSTAN MOTOR
THROUGH HOLE (LATGE HOLE)
SMALL HOLES
HOLES
THROUGH HOLE
RING GEAR
CHASSIS
RING GEAR
DETENT ARM
SUB CAM GEAR

Figure M40

3-7-3. ASSEMBLY PROCEDURES OF MAIN CAM GEAR AND PINCH SPEED DOWN GEAR

1. Install the Main Cam Gear on to the Sub Cam Gear so that the small hole on the Main Cam Gear aligns with small hole on the Ring Gear as shown in Figure M41.
2. Insert a retaining ring.
3. Install the Pinch Speed Down Gear from top side of chassis so that the small hole on the Main Cam Gear as shown in Figure M41.

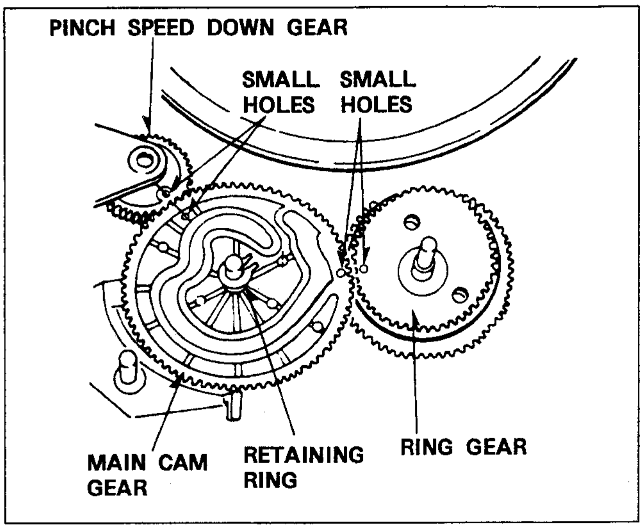

PINCH SPEED DOWN GEAR
SMALL HOLES
SMALL HOLES
MAIN CAM GEAR
RETAINING RING
RING GEAR

Figure M41

3-7-4. ASSEMBLY PROCEDURES OF LOADING CAM GEAR AND RETAINER GEAR

1. Install the Retainer Gear onto the Ring Gear so that the two holes on the Retainer Gear align with the two holes on the Ring Gear, at this time, small hole on the Main Cam Gear should aligns with small hole on the Retainer Gear as shown in Figure M42.
2. Install the Loading Cam Gear so that the small hole which is directly outside of the large hole on the Loading Cam Gear is aligned with the outside hole of the Retainer Gear as shown in Figure M42.

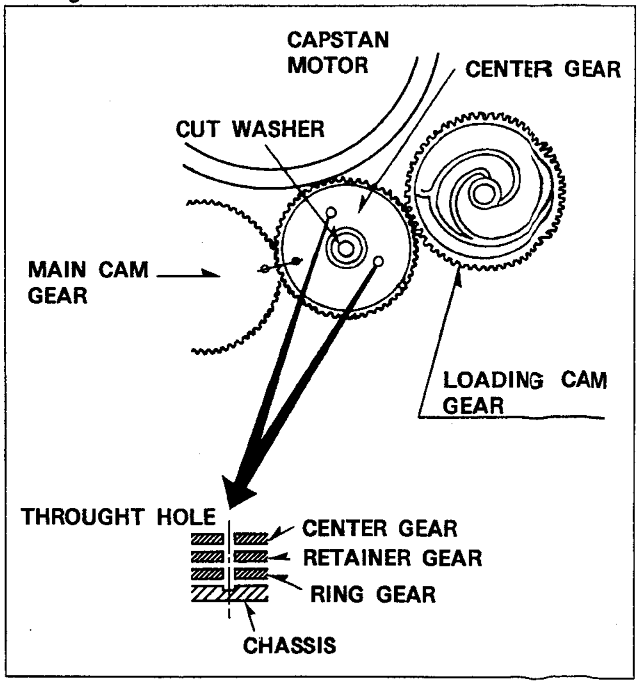

CAPSTAN MOTOR
CENTER GEAR
CUT WASHER
MAIN CAM GEAR
LOADING CAM GEAR
THROUGHT HOLE
CENTER GEAR
RETAINER GEAR
RING GEAR
CHASSIS

Figure M42

3-7-5. ASSEMBLY PROCEDURES OF CENTER GEAR

1. Softly Install the Center Gear onto the Retainer Gear so that the two holes in the Center Gear align with the holes on the Retainer Gear, then install the cut washer as shown in Figure M43.

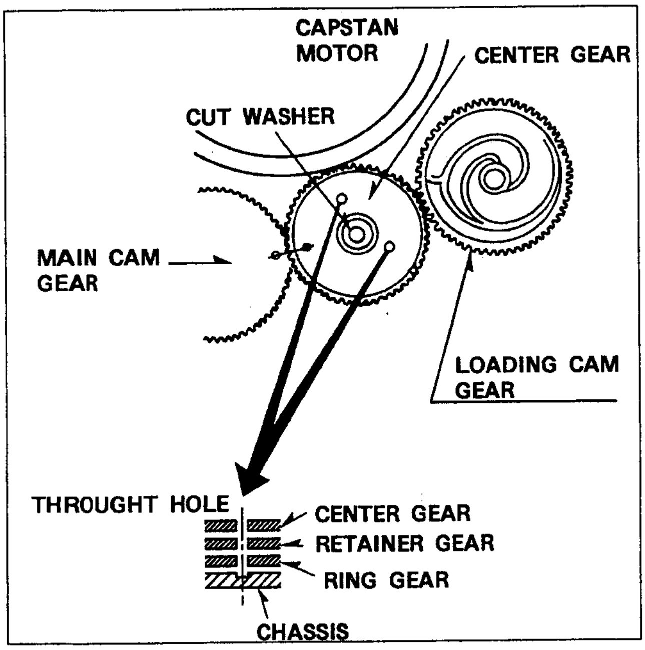

CAPSTAN MOTOR
CENTER GEAR
CUT WASHER
MAIN CAM GEAR
LOADING CAM GEAR
THROUGHT HOLE
CENTER GEAR
RETAINER GEAR
RING GEAR
CHASSIS

Figure M43

3-7-6. ASSEMBLY PROCEDURES OF MAIN LEVER AND CAM FOLLOWER ARM UNIT

1. Install the Main Rod and then insert the cut washers as shown in Figure M44.
2. Install the Cam Follower Arm so that the pin of the Cam Follower Arm inserts into the groove of the Main Cam Gear and also inserts into the slot on the Main Rod, insert the retaining ring.

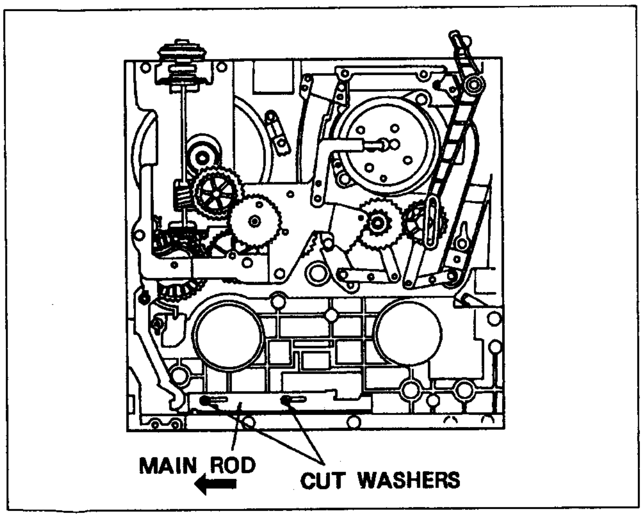

MAIN ROD
CUT WASHERS

Figure M44

3-7-7. ASSEMBLY PROCEDURES OF LOADING GEAR (T), LOADING GEAR (S) SECTOR GEAR

1. Set the P2 and P3 posts to fully unloaded position, then install the Loading Gear (T) and (S) so that the outer hole on the Loading Gear (T) aligns with the outer hole on the Loading Gear (S) as shown in Figure M45-A.
2. Install the Sector Gear so that the outer hole in the Sector Gear aligns with the projection mark on Loading Gear (T).
3. Insert 3 retaining rings as shown in Figure M45-B.

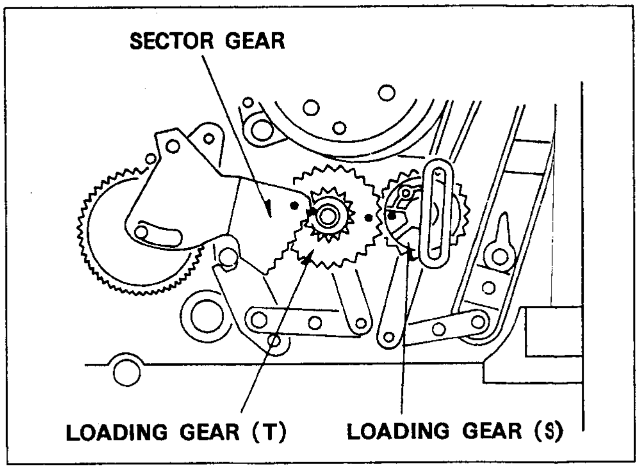

SECTOR GEAR
LOADING GEAR (T)
LOADING GEAR (S)

Figure M45-A

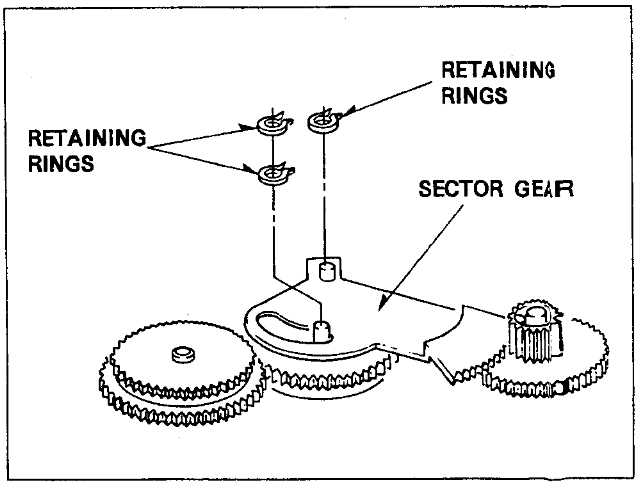

RETAINING RINGS
RETAINING RINGS
SECTOR GEAR

Figure M45-B

3-7-8. ASSEMBLY PROCEDURES OF CONNECTION GEAR

Note: Before assembling, Sub Cam Gear position (and positions of bottom side gears) must be correct as described before (Figure M39-B).

1. Install the Connection Gear so that the small hole on the Connection Gear aligns with the small hole on the Sub Cam Gear as shown in Figure M46.

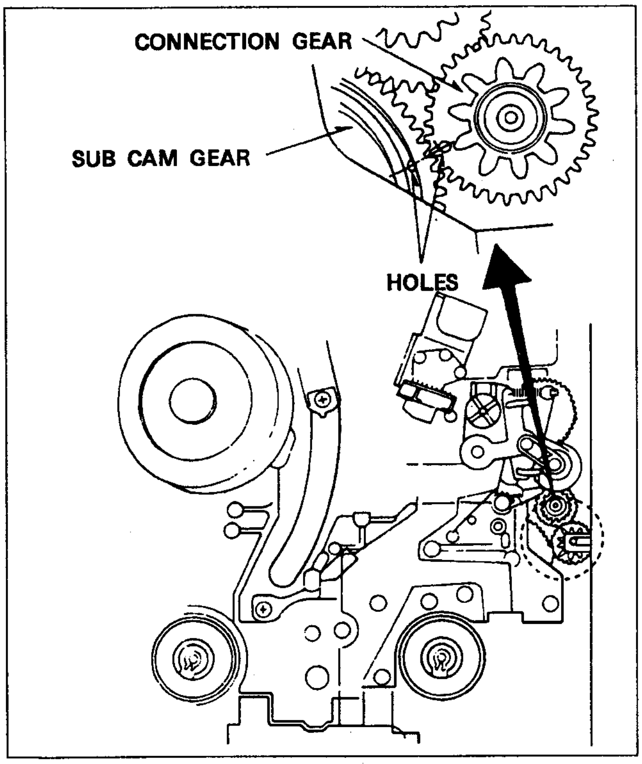

CONNECTION GEAR
SUB CAM GEAR
HOLES

Figure M46

3-7-9. ASSEMBLY PROCEDURES OF MODE SWITCH AND P5 PULL OUT SECTOR GEAR

1. Turn the Center Gear to unloading position.
2. Install the mode Select Switch and tighten the mounting screw, then solder the 5 soldering portions.
3. Install the P5 Pull Out Sector Gear so that the hole of P5 Pull Out Sector Gear aligns with the tip of gear at P5 Arm as shown in Figure M47.

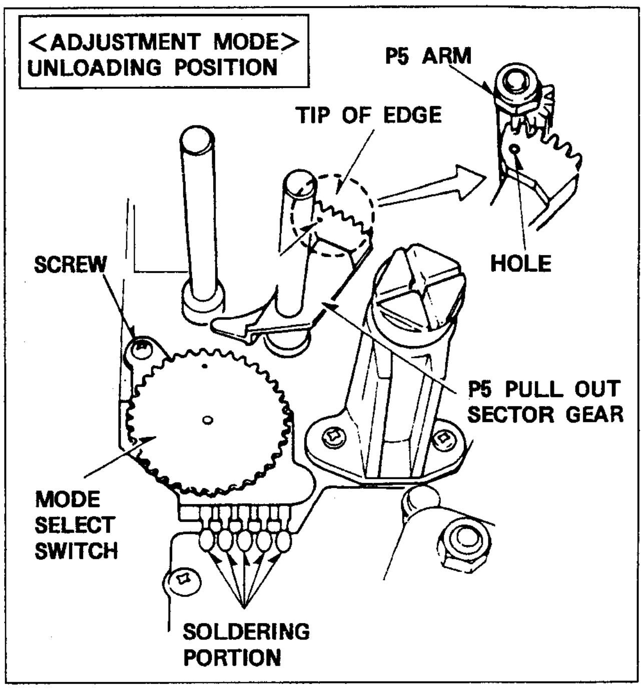

<ADJUSTMENT MODE>
UNLOADING POSITION
P5 ARM
TIP OF EDGE
SCREW
HOLE
P5 PULL OUT SECTOR GEAR
MODE SELECT SWITCH
SOLDERING PORTION

Figure M47

3-7-10. ASSEMBLY PROCEDURES OF PINCH CAM AND PRESSURE ROLLER UNIT

1. Install the Pinch Cam while pushing the P5 post forward. The gear of the Pinch Cam should drop to a seated position. In this position make sure hole in the Mode Select Switch aligns with small hole on the Pinch Cam, also the small rift on the Pinch Cam should align with the hole on the Pinch Speed Down Gear sa shown in Figure M48.
2. Install the Pressure Roller Unit. Make sure the seats perfectly onto the Pinch Cam, then install the Pinch Cam Cap.

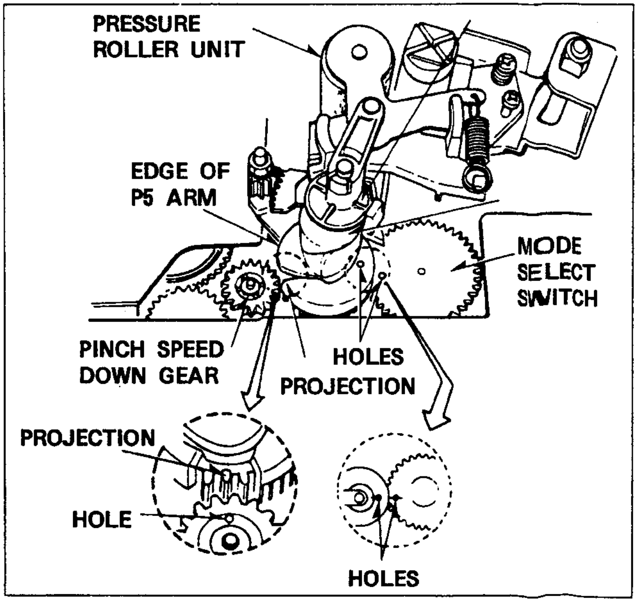

PRESSURE ROLLER UNIT
EDGE OF P5 ARM
MODE SELECT SWITCH
PINCH SPEED DOWN GEAR
HOLES
PROJECTION
PROJECTION
HOLE
HOLES

Figure M48

3-7-11. ASSEMBLY PROCEDURES OF GEAR BASE UNIT

1. Install the Gear Base Unit and screw 4 screws (F) as shown in Figure M49.

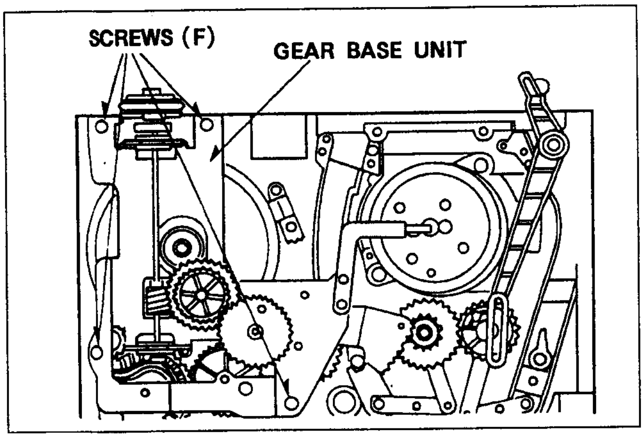


Figure M49

Note: The Gear Base Unit has 2 gears and worm shaft. There is no adjustment for these gears.

3-6-12. REINSTALLATION OF CASSETTE COMPARTMENT

When you reinstall the cassette compartment, the position adjustment of mechanism is necessary for correct operation, as follows.

A. Confirmation of STOP Alignment Condition

1. Turn the Worm shaft counter-clockwise or clockwise until mechanism is placed into the Alignment Condition as following conditions.
   a) Identification hole on the Mode Select Switch at 6 oclock position and aligned with small hole on Pinch Cam. (Figure M48)
   b) P5 Arm is completely loading position and the Inclined Base (S) and (T) are completely unloading position.
   c) Small hole on Sub Cam Gear should align with small hole on the Connection Gear (Figure M46) and rectangular mark on the Connection Gear should be at a 3 oclock position.
   d) Pressure Roller Unit is UP position.

B. Confirmation of Cassette Compartment

1. Confirm that the Cassette Compartment is aligned properly. In the EJECT position (Cassette Holder up and advanced to the front) the two V-shaped marks on the slide switch should align. The slide switch is located on the right side of the Cassette Assembly towards the rear as shown in Figure M50A.

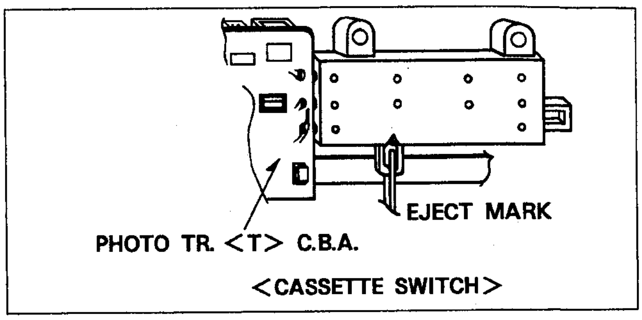


Figure M50-A

2. Remove 3 screws (A) as shown in Figure M50-B.
3. Take the top plate out.
4. Take the cassette Holder unit out as shown in Figure M50-C.

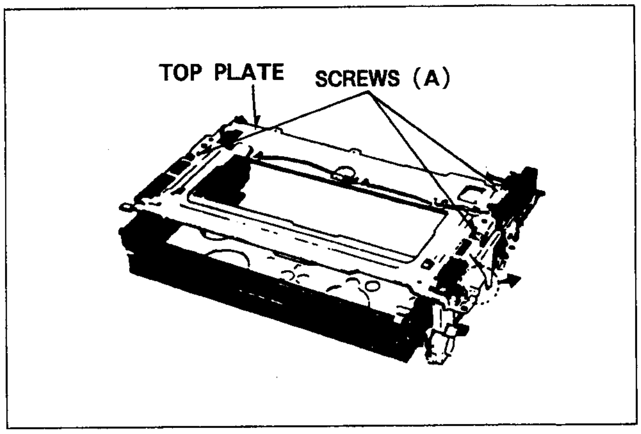


Figure M50-B

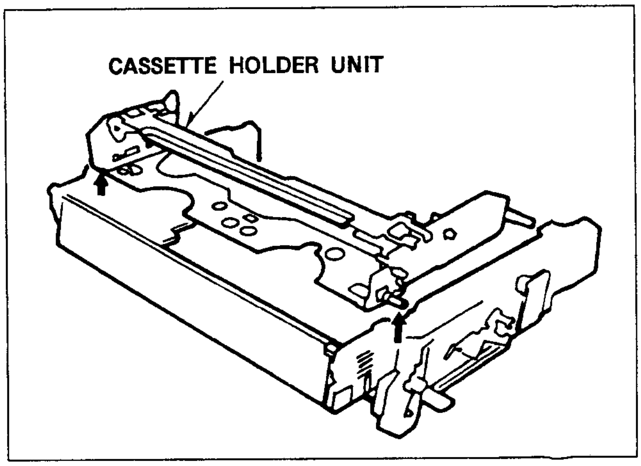


Figure M50-C Removal of Cassette Holder Unit

5. Press the sub wiper arm (R) to direction indicated by arrow so that the sub wiper arm (R) comes to cassette down position (STOP) completely as shown in Figure M50-D and keepit. In this position, the arrow on the Sub Wiper Arm (R) should align with the arrow on the Rack (A)(1) Unit as shown in Figure M50-E.

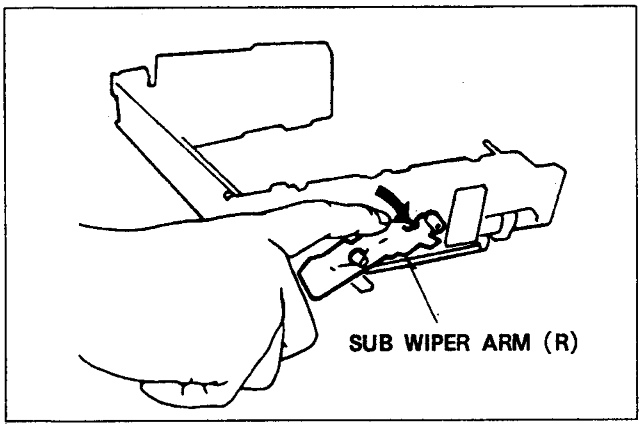

SUB WIPER ARM (R)

Figure M50-D

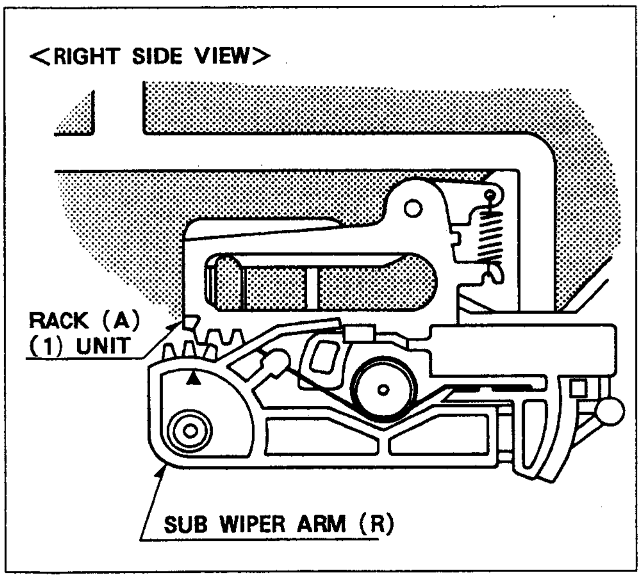

<RIGHT SIDE VIEW>
RACK (A) (1) UNIT
SUB WIPER ARM (R)

Figure M50-E

6. If the Cassette Compartment is not aligned, realignment may be accomplished by pushing the Main Shaft Unit to the right (gently) and pushing the front of the Rack Unit to the left. This procedure will disengage the teeth of the Rack Gear from the teeth on Sub Wiper Arm assembly.
This will allow you to change the positional relationship between the Sub Wiper Arm Assembly and Rack Unit. This procedure is best attempted in the EJECT position. Once this is done, check for smooth operation of the compartment by inserting a cassette, and pushing in, and down.

C. Installation Procedure

1. Bring loading mechanism to the STOP (Sub-load) position.
2. Confirm that the chassis is aligned properly for Alignment Condition as shown in Figure M39-B and M39-C.
3. Put the Sub Wiper Arm (R) in its full down position (Sub Wiper Arm should rest on plastic protrusion on the bottom of the right side plate).
4. Install the cassette compartment (without cassette holder) to chassis so that the rectangular marking (or slot) on the connection gear should be line up with first tooth of the Rack Gear as shown in Figure M50-F and M50-G.

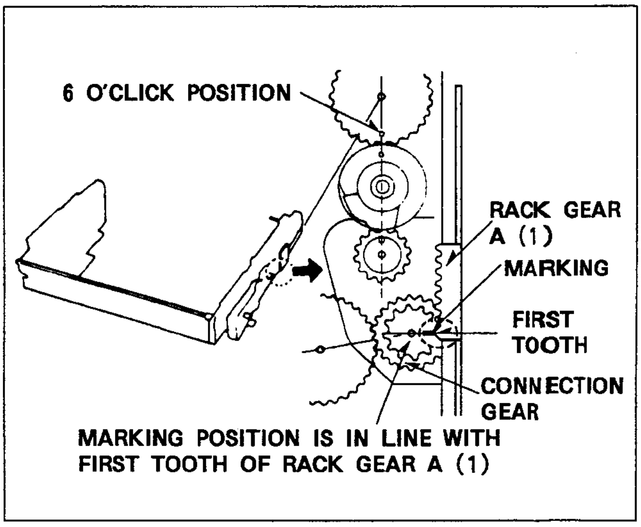

6 O'CLICK POSITION
RACK GEAR A (1)
MARKING
FIRST TOOTH
CONNECTION GEAR
MARKING POSITION IS IN LINE WITH FIRST TOOTH OF RACK GEAR A (1)

Figure M50-F

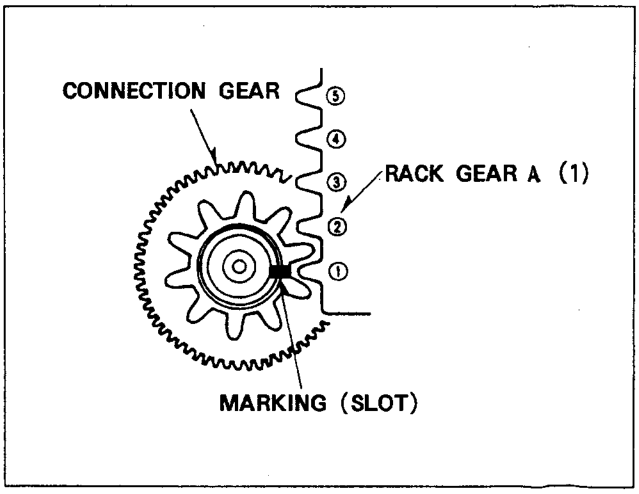

CONNECTION GEAR
⑤
④
③
②
①
RACK GEAR A (1)
MARKING (SLOT)

Figure M50-G

5. Tighten the 4 screws (D) as shown in Figure M50-H.

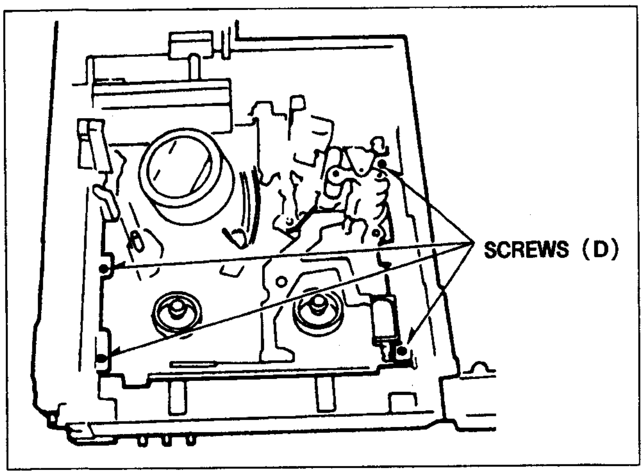


Figure M50-H

6. Manually move the loading mechanism toward the EJECT position.
7. Stop the manual eject procedure just before completion, so that the Sub Wiper Arms straight up. This position is also characterized by the channel guides (in the Wiper Arms) being directly under the cut outs on the top of the Cassette Compartment base (Figure M50-I).
8. Install the Cassette Holder Unit in the Cassette Compartment Base. The Cassette holder should drop into place if the Sub Wiper Arms are portioned as called for in step 7.

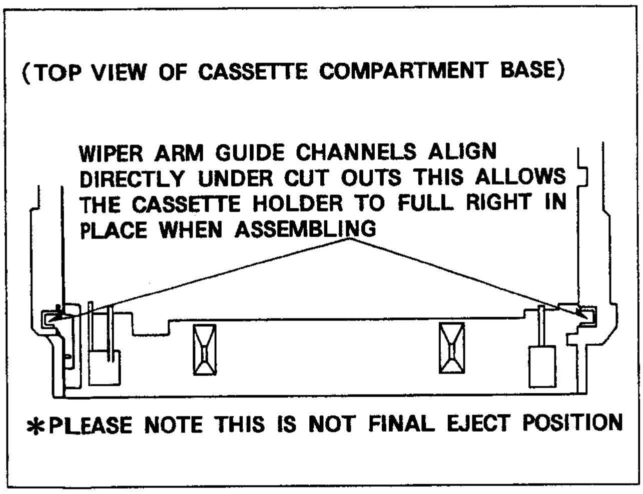

(TOP VIEW OF CASSETTE COMPARTMENT BASE)
WIPER ARM GUIDE CHANNELS ALIGN DIRECTLY UNDER CUT OUTS THIS ALLOWS THE CASSETTE HOLDER TO FULL RIGHT IN PLACE WHEN ASSEMBLING
*PLEASE NOTE THIS IS NOT FINAL EJECT POSITION

Figure M50-I

Note: For proper front loading, the guide pin on the opener lever should follow the upper track of the right side panel as shown in Figure M50-J.

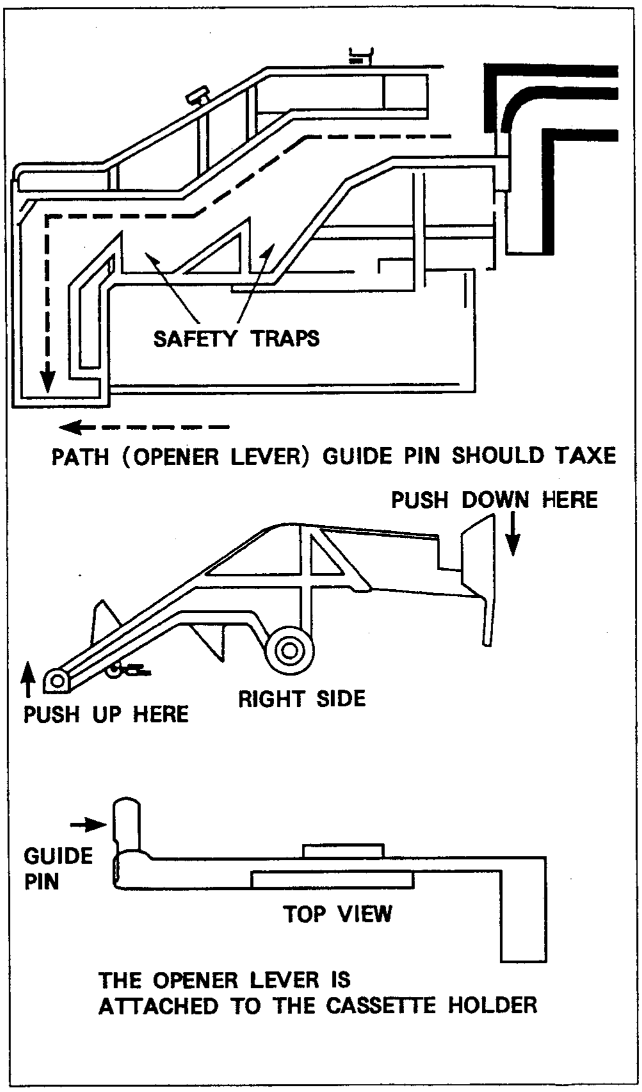

SAFETY TRAPS
PATH (OPENER LEVER) GUIDE PIN SHOULD TAXE
PUSH DOWN HERE
PUSH UP HERE
RIGHT SIDE
GUIDE PIN
TOP VIEW
THE OPENER LEVER IS ATTACHED TO THE CASSETTE HOLDER

Figure M50-J Right Side Plate

9. Install the top plate on the Cassette Compartment Base and tighten the 3 screws (A) as shown in Figure M50-B.
10. Manually confirm that front loading and main loading run smoothly. Also confirm EJECT before power is applied.

SECTION 4

ELECTRICAL ADJUSTMENTS

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4-1. TEST & SERVICE EQUIPMENT

To perform the electrical adjustment completely the following equipments are required.

1. VTVM (Vacuum Tube Volt Meter)
   Capacity : 0.001 to 50V
2. DVM (Digital Volt Meter)
   Capacity : 0.001 to 50V
3. Dual-Trace Oscilloscope (with probes)
   Capacity : 0.005 to 50V/div, DC to 30MHz
4. Frequency Counter
   Capacity : 0 to 10MHz
5. Sine Wave Signal Generator (RC Oscillator)
   Capacity : 0 to 10MHz
6. Video Signal Generator (Composite)
7. Spectrum analyzer
8. Color Monitor TV
9. Waveform Monitor
10. Alignment Tape (VFM8080HQFP)

4-2. HOW TO READ THE ADJUSTMENT PROCEDURE TABLE

BOARD	MAIN C.B.A.
TP	TP3502 [F-2]
ADJ	VR2002 [A-3]
TAPE	ALIGNMENT TAPE
INPUT	COLOR BAR
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	T = 6.5 ± 0.5H

BOARD: Adjustment position of Print Circuit Board.
TP: Connection point (Test Point) of measuring equipment
* ( ) shown TP location on the board.
ADJ.: Adjustment component
* ( ) shown VR location on the board.
TAPE: Tape for adjustment.
INPUT: Supply a signal for adjustment.
MODE: Mode of VTR.
Example: REC → PLAY is recording signal and playback the portion just recorded.
M.EQ: Measuring equipment.
SPEC: Specification for adjustment.

4-3. ELECTRICAL ADJUSTMENT PROCEDURES

4-3-1. PG SHIFTER ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	TP8002(HEAD SW)(A-1), VIDEO OUT
ADJ	VR2002(A-4)
TAPE	VFM8080HQFP, PORTION:2
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	T = 7.5H ± 0.5H

Note: This adjustment should be performed only after completion of the Tape Interchangeability adjustment.

1. Playback the alignment tape at the portion 2.
2. Connect the oscilloscope to TP8002 for CH1 and Video Out for CH2.
3. Adjust VR2002 so that the falling edge of switching pulse becomes 7.5H ± 0.5H before the V-sync portion as shown in Figure E1.

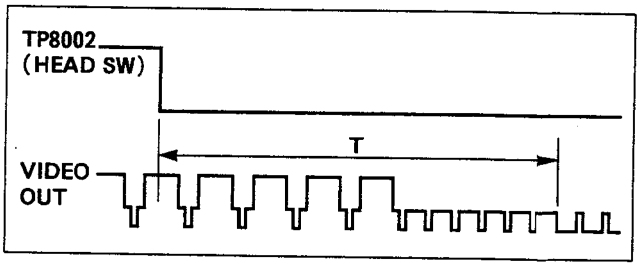


Figure E1

4-3-2. SLOW FREE RUN ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	TP8009(A-1)
ADJ	VR2001(A-4)
TAPE	VFM8080HQFP, PORTION: 2
INPUT	
MODE	PLAY PAUSE
M.EQ	FREQUENCY COUNTER
SPEC	684Hz ± 5Hz

1. Playback the alignment tape at the portion 2.
2. Connect a jumper wire between TP8006 and GND on the Video 3 C.B.A.
3. Connect the frequency counter to TP8009 on the Video 3 C.B.A.
4. Adjust VR2001 so that the reading of frequency counter is f = 648Hz ± 5Hz.
5. After this adjustment remove the jumper wire from TP8006 and GND.

4-3-3. SLOW TRACKING ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	VIDEO OUT
ADJ	FWD: VR2005(A-3), REV: VR2006(A-3)
TAPE	COLOR BAR SIGNAL RECORDED TAPE
INPUT	
MODE	SLOW PLAY BACK
M.EQ	MONITOR TV
SPEC	NO NOISE BAR

Note: This adjustment should be performed only after completion of 4-3-2. SLOW FREE RUN adj.

1. Record the color bar signal for a few minutes.
2. Playback the recorded portion in still mode.
3. Push the tracking button "+" and "-" at same time.
4. Adjust VR2005 and VR2006 so that the noise bar dose not appear and lower on the monitor TV.

4-3-4. V-LOCK ADJ.

BOARD	SERVO & SYSTEM CONTROL C.B.A.
TP	VIDEO OUT
ADJ	VR2004(A-3)
TAPE	BLANK TAPE
INPUT	COLOR BAR
MODE	STILL
M.EQ	MONITOR TV
SPEC	NO V-DANCING

Note: This adjustment should be performed only after completion of 4-3-3. SLOW TRACKING Adj.

1. Record the color bar signal for a few minutes.
2. Playback the recorded portion in still mode.
3. Adjust VR2004 so that the V-dancing dose not appear and lower on the monitor TV.

4-3-5. AUTO TRACKING GAIN ADJ.

BOARD	VIDEO 1 C.B.A.
TP	TP3005(A-3)
ADJ	VR3005(B-3)
TAPE	
INPUT	SINE WAVE (4MHz, 200mVp-p)
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	2.5V ± 0.1V

[SET UP]
S-VHS : OFF
INPUT : LINE

1. Set the sinewave generator output to 4MHz, 200mVp-p.
2. Supply the sinewave signal to TP3006.
3. Connect the oscilloscope to TP3005.
4. Adjust VR3005 so that the level is 2.5V ± 0.1V.

4-3-6. DOC BALANCE ADJ.

BOARD	VIDEO 1
TP	TP3001(C-3)
ADJ	VR3001(B-4)
TAPE	
INPUT	COLOR BAR SIGNAL (1Vp-p)
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	LESS THAN 50mVp-p

1. Set the color bar signal generator output to 1Vp-p.
2. Supply the color bar signal to video input.
3. Connect the oscilloscope to TP3001.
4. Adjust VR3001 so that the video level becomes minimum as much as possible (Figure E2).

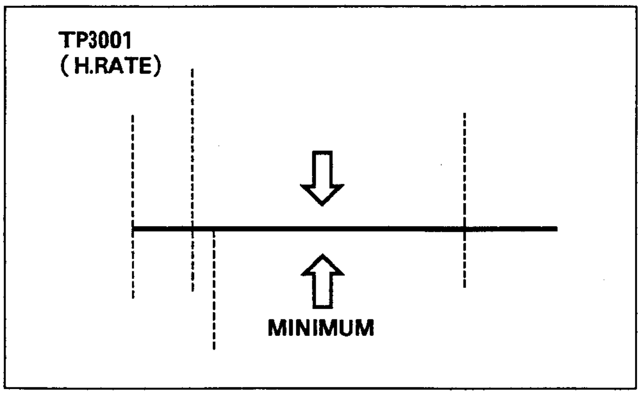


Figure E2

4-3-7. CHROMA COMB FILTER ADJ.

BOARD	VIDEO 1 C.B.A.
TP	TP3803(C-2)
ADJ	VR3801(B-2),VR3802(C-2),VR3804(B-2), VR3805(B-2)
TAPE	MULTI BURST SELF RECORDED TAPE
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	C LEVEL = MINIMUM

[SET UP]
IMAGE : EDIT (OSD)

1. Record the multi burst signal (no burst) a few minutes by the VHS mode.
2. Connect a jumper wire between TP3805 and TP8004.
3. Connect a jumper wire between TP3802 and GND.
4. Connect the oscilloscope to TP3803.
5. Playback the just recorded portion.
6. Adjust VR3801 and VR3804 so that the chroma signal becomes minimum as possible (Figure E3).
7. Remove the jumper wire between TP3802 and GND.
8. Connect a oscilloscope to TP3803.
9. Adjust VR3801 and VR3804 so that the chroma signal becomes minimum as passible.

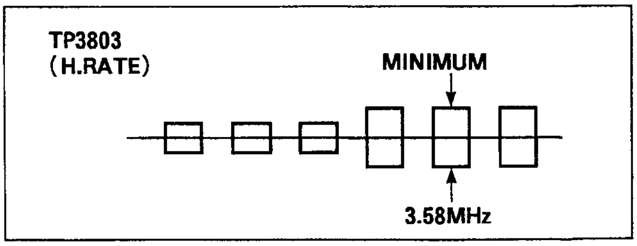


Figure E3

4-3-8. CNR ADJ.

BOARD	VIDEO 1 C.B.A.
TP	T3804(C-1)
ADJ	VR3803(C-2), VR3806(C-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOR BAR SIGNAL
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	LESS THAN 300mVp-p

Note: This adjustment should be always completed after 4-3-6. DOC BALANCE adj.

1. Record the color bar signal a few minutes by the S-VHS mode.
2. Connect the oscilloscope to TP3804.
3. Playback the just recorded portion.
4. Adjust VR3803 and VR3806 mutually so that chroma signal becomes minimum as possible (less than 300mVp-p) as shown in Figure E4.

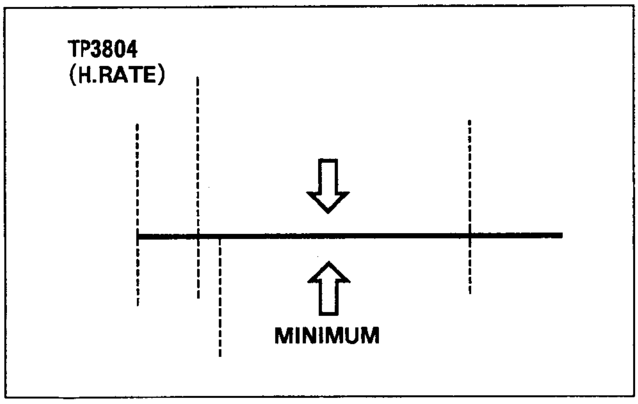


Figure E4

4-3-9. A/D INPUT LEVEL ADJ.

BOARD	VIDEO 3
TP	TP8001(D-1)
ADJ	VR8001(D-1)
TAPE	
INPUT	COLOR BAR SIGNAL
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	2.4Vp-p ± 0.05Vp-p

[SET UP]
INPUT : LINE

1. Supply a color bar signal to video input.
2. Connect the Oscilloscope to TP8001.
3. Adjust VR8001 so that video level is 2.4Vp-p ± 0.05Vp-p as shown in Figure E5.

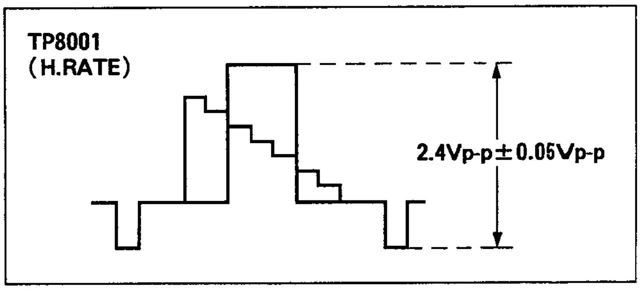


Figure E5

4-3-10. CHARACTER POSITION ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ	C3111 (B-1)
TAPE	
INPUT	COLOR BAR SIGNAL
MODE	E-E
M.EQ	MONITOR
SPEC	SEE FIGURE

1. Supply a color bar signal to the video input.
2. Set the MENU Switch to SET.
   The menu screcn now appears on the TV.(If the Hour Meter is appeared, advance to the next page by using the PLAY (-) or REC (+) button.)
3. Adjust C3111 so that the end of the cursor is located as shown in Figure E6.

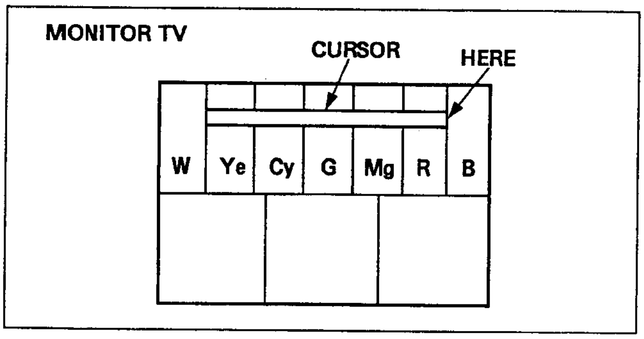


Figure E6

4-3-11. S-VHS RECORDING CURRENT ADJ.

BOARD	VIDEO 1 C.B.A. / HEAD AMP C.B.A.
TP	TP5003(H)(B-2), TP5002(L)(B-2)
ADJ	VR5001(REC-Y)(B-2), VR5002(REC-C)(B-2)
TAPE	S-VHS BLANK TAPE
INPUT	COLOR BAR SIGNAL
MODE	REC
M.EQ	OSCILLOSCOPE
SPEC	40mVp-p±2mVp-p(C),150mVp-p±10mVp-p(Y)

[SET UP]

S-VHS SW : ON
INPUT : LINE

1. Supply the color bar signal to video input.
2. Connect the oscilloscope to TP5003 (HOT) and TP5002 (GND).
3. Place the unit in recording mode with color bar signal.
4. Before chrominance recording current adjustment, luminance recording current (VR5001) should be closed to observe the chrominance signal.
5. Adjust VR5002 for 40mVp-p ± 2mVp-p as a cyan level of the chrominance signal as shown in Figure E7.
6. Next, adjust VR5001 for 150mVp-p ± 10mVp-p as luminance signal us shown in Figure E8.

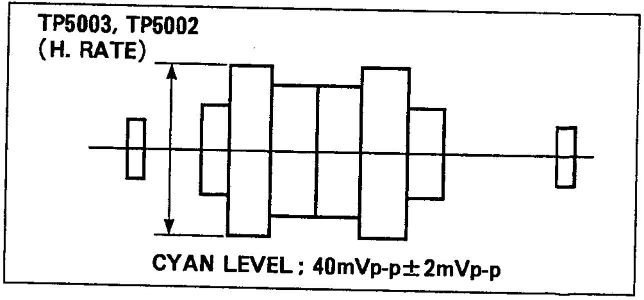


Figure E7

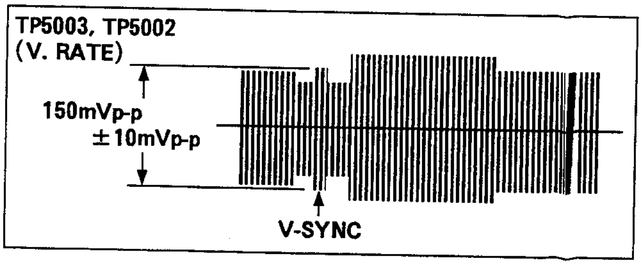


Figure E8

4-3-12. VHS RECORDING CURRENT ADJ.

BOARD	VIDEO 1 C.B.A. / HEAD AMP C.B.A.
TP	TP5003(H)(B-2), TP5002(L)(B-2)
ADJ	VR3008(C-3)
TAPE	BLANK TAPE
INPUT	COLOR BAR SIGNAL
MODE	REC/PLAY
M.EQ	OSCILLOSCOPE
SPEC	160mVp-p ± 10mVp-p

Note: This adjustment should be always completed after S-VHS Recording Current Adjustment.

[SET UP]
S-VHS SW : OFF
INPUT : LINE

1. Supply the color bar signal to video input.
2. Connect the oscilloscope to TP5003 (HOT) and TP5002 (GND).
3. Place the unit in recording mode with color bar signal.
4. Adjust VR3008 for 160mVp-p ± 10mVp-p as a luminance signal as shown in Figure E9.

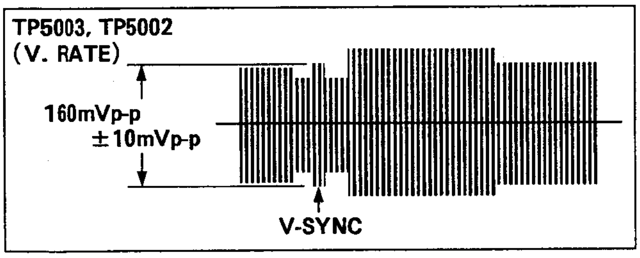


Figure E9

4-3-13. VHS PLAYBACK A/D LEVEL ADJ.

BOARD	VIDEO 1/VIDEO 3
TP	TP8001(D-1)
ADJ	VR3003(C-4)
TAPE	VHS SELF RECORDED TAPE
INPUT	COLOR BAR SIGNAL
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	2.4Vp-p ± 0.1Vp-p

Note: This adjustment should be always completed after completion of all adjustments on the recording loop.

[SET UP]
S-VHS SW : OFF
INPUT : LINE
EDIT SW : OFF

1. Supply the color bar signal to video input.
2. Record the color bar signal.
3. Connect the oscilloscope to TP8001.
4. Playback the just recorded portion.
5. Adjust VR3003 so that the level is 2.4Vp-p ± 0.1Vp-p as shown in Figure E10.

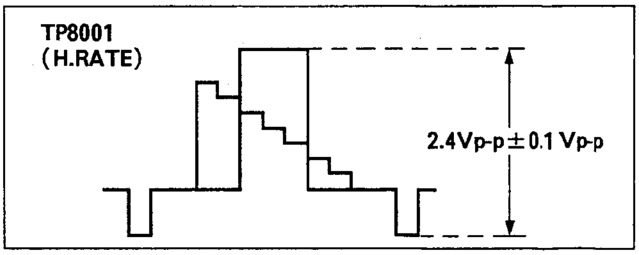


Figure E10

4-3-14. VHS Y PLAYBACK LEVEL ADJ.

BOARD	VIDEO 3 C.B.A.
TP	VIDEO OUT
ADJ	VR8002(A-1)
TAPE	VHS SELF RECORDED TAPE
INPUT	COLOR BAR
MODE	PLAY
M.EQ	WAVEFORM MONITOR
SPEC	1.0Vp-p ± 0.02Vp-p

Note: This adjustment should be always completed after completion of all adjustments on the recording loop.

[SET UP]
S-VHS SW : OFF
INPUT SW : LINE
EDIT SW : OFF

1. Supply the color bar signal to video input and recording it for a few minute.
2. Connect the waveform monitor to the video out with a 75Ω termination.
3. Playback the just recorded portion.
4. Adjust VR8002 for 1.0Vp-p ± 0.02Vp-p as a luminance level as shown in Figure E11.

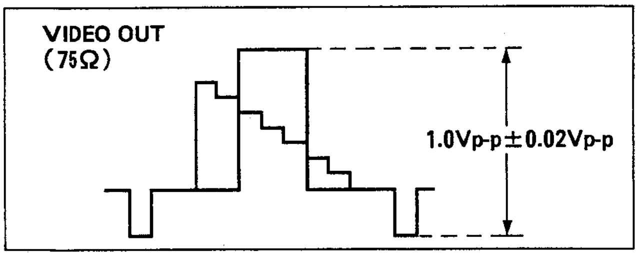


Figure E11

4-3-15. S-VHS SUB EMPHASIS LEVEL ADJ.

BOARD	VIDEO 1 C.B.A.
TP	TP3002(C-3)
ADJ	VR3004(C-3)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOR BAR
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	400mVp-p ± 10mVp-p

Note: This adjustment should be always completed after completion of all adjustments on the recording loop.

[SET UP]
S-VHS SW : ON
EDIT SW : OFF

1. Supply the color bar signal to video input and record it for a few minute.
2. Playback the just recorded portion.
3. Connect the oscilloscope to TP3002.
4. Adjust VR3004 for 400mVp-p ± 10mVp-p as shown in Figure E12.

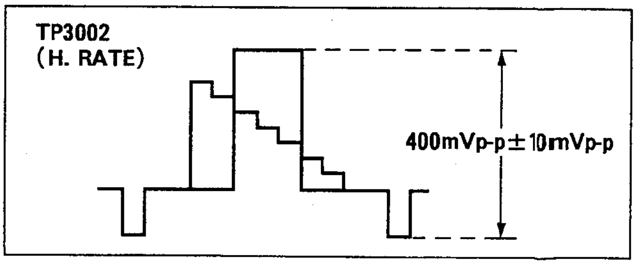


Figure E12

4-3-16. S-VHS PLAYBACK Y LEVEL ADJ.

BOARD	VIDEO 1
TP	VIDEO OUT
ADJ	VR3002(C-3)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOR BAR SIGNAL
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	1.0Vp-p ± 0.02Vp-p

Note: This adjustment should be always completed after completion of all adjustments on the recording loop and VHS playback adjustment.

[SET UP]

S-VHS SW : ON
INPUT SW : LINE
EDIT SW : OFF

1. Supply the color bar signal to video input and recording it for a few minutes.
2. Connect the oscilloscope to the video out with a 75Ω termination.
3. Playback the just recorded portion.
4. Adjust VR3002 for 1.0Vp-p ± 0.02Vp-p as shown in Figure E13.

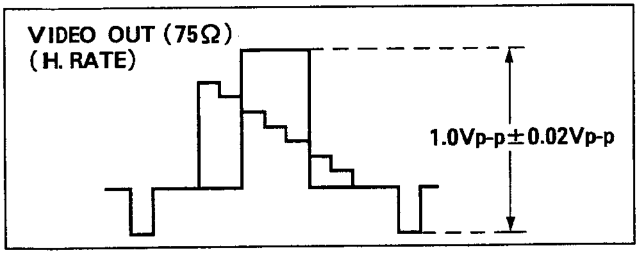

VIDEO OUT (75Ω)
(H. RATE)
1.0Vp-p±0.02Vp-p

Figure E13

4-3-17. VHS PLAYBACK FREQUENCY RESPONSE ADJ.

BOARD	VIDEO 1 C.B.A.
TP	VIDEO OUT
ADJ	VR3009(C-3)
TAPE	SELF RECORDED TAPE
INPUT	SWEEP (WITH OUT BURST)
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	100KHz : 2MHz = 5 : 5.0 ± 1.0

1. Set the sweep generator output as shown in Figure E14.
2. Record the sweep signal.
3. Playback the just recorded portion.
4. Connect the oscilloscope to video out.
5. Adjust VR3009 so that the playback frequency response becomes 5 : 5.0 ± 1.0 at the marker points of 100KHz and 2MHz as shown in Figure E15.
   (Vary the vertical scope setting until the 100KHz level reaches 5 division)

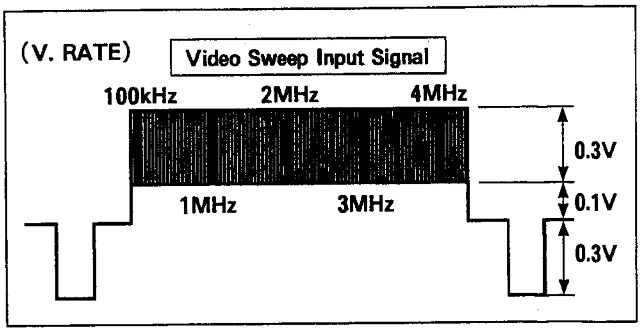

(V. RATE)
Video Sweep Input Signal
100kHz
2MHz
4MHz
1MHz
3MHz
0.3V
0.1V
0.3V

Figure E14

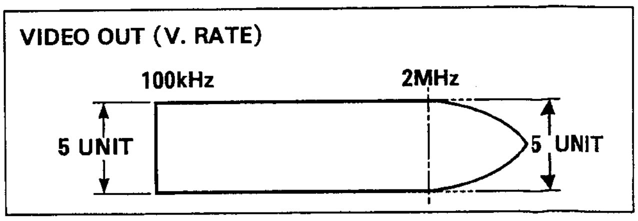

VIDEO OUT (V. RATE)
100kHz
2MHz
5 UNIT
5 UNIT

Figure E15

4-3-18. S-VHS PLAYBACK FREQUENCY RESPONSE

BOARD	VIDEO 1
TP	VIDEO OUT
ADJ	VR3006(C-3)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	SWEEP (WITHOUT BURST)
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	100KHz : 4MHz = 5 : 4.0 ± 0.5

1. Set the sweep generator output as shown in Figure E16.
2. Record the sweep signal.
3. Playback the just recorded portion.
4. Connect the oscilloscope to video out.
5. Adjust VR3006 so that the playback frequency response becomes 5 : 4.0 ± 0.5 at the marker point of 100KHz and 4MHz as shown in Figure E17.
   (Vary the vertical scope setting until the 100KHz level reaches division)

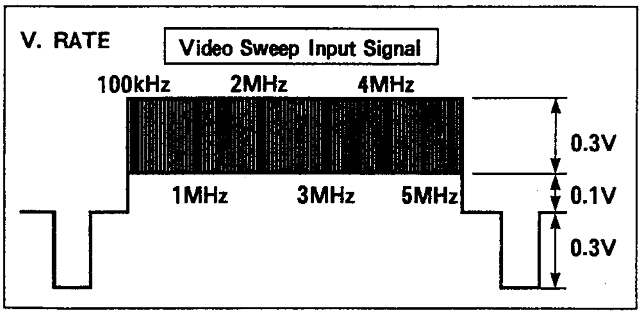

V. RATE
Video Sweep Input Signal
100kHz
2MHz
4MHz
1MHz
3MHz
5MHz
0.3V
0.1V
0.3V

Figure E16

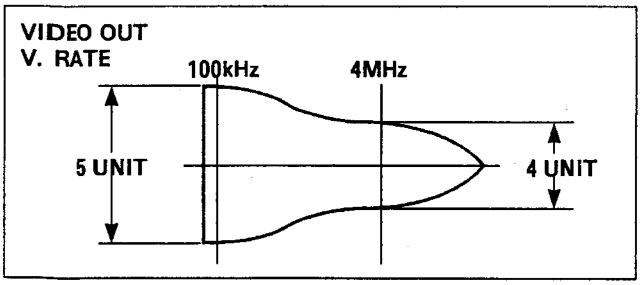

VIDEO OUT
V. RATE
100kHz
4MHz
5 UNIT
4 UNIT

Figure E17

4-3-19. S-VHS SUPPER LIMITER ADJ.

BOARD	VIDEO 1 C.B.A.
TP	TP3003(B-3)
ADJ	VR3007(B-3)
TAPE	
INPUT	SINEWAVE (7MHz 200mVp-p)
MODE	E-E
M.EQ	OSCILLOSCOPE
SPEC	400mVp-p ± 20mVp-p

Note: Prepare the oscilloscope which is type's more than 100MHz.

[SET UP]
S-VHS ON

1. Set the signal generator (sine-wave) to 7MHz, 200mVp-p and supply it to TP3004.
2. Connect the 100MHz type's oscilloscope to TP3003.
3. Adjust VR3007 so that the level becomes 400mVp-p ± 20mVp-p as show in Figure E18.

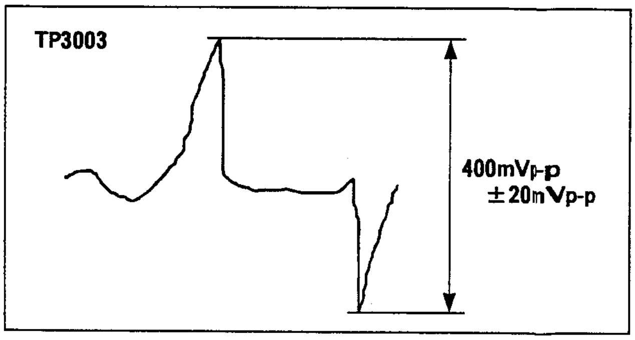

TP3003
400mVp-p
±20mVp-p

Figure E18

4-3-20. WHITE BALANCE ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ	VR3302(D-1), VR3303(D-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOR BAR SIGNAL
MODE	PLAY
M.EQ	WAVEFORM MONITOR
SPEC	A = LESS THAN 8mVp-p

[SET UP]
S-VHS SW : ON
INPUT SW : LINE

1. Supply the color bar signal to video input.
2. Record the color bar signal by S-VHS mode for a few minutes.
3. Playback the just recorded portion.
4. Set the waveform monitor select switch to 3.58MHz BAND PASS mode.
5. Connect the waveform monitor to video output.
6. Adjust VR3302 and VR3303 so that the "A" portion becomes minimum as shown in Figure E19.

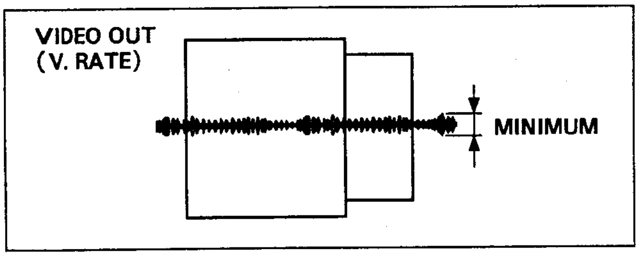


Figure E19

4-3-21. PLAYBACK CHROMA LEVEL ADJ.

BOARD	VIDEO 2 C.B.A.
TP	VIDEO OUT
ADJ	VR3304(D-1)
TAPE	S-VHS SELF RECORDED TAPE
INPUT	COLOR BAR
MODE	PLAY
M.EQ	WAVE FORM MONITOR
SPEC	0.6Vp-p ± 0.03Vp-p

[SET UP] S-VHS SW : ON

1. Supply the color bar signal to video input and record it for a few minute.
2. Connect the oscilloscope to video output with a 75Ω termination.
3. Playback the just recorded portion.
4. Adjust VR3304 so that the cyan level becomes 0.6Vp-p ± 0.03Vp-p as shown in Figure E20.

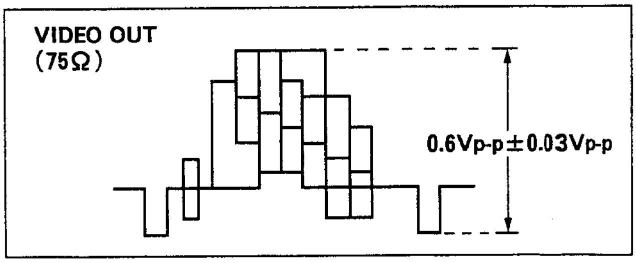


Figure E20

4-3-22. PRE-AMPLIFIER ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO OUTPUT CH1, CH2
ADJ	Hi-Fi CH1: VR4501(D-1), CH2: VR4502(D-1)
TAPE	
INPUT	1KHz, -8dBv (1.13Vp-p) SINEWAVE SIGNAL
MODE	STOP
M.EQ	V.T.V.M.
SPEC	Hi-Fi OUTPUT : -8dBv ± 0.2dBv NORM OUTPUT : -8dBv ± 1dBv

1. Set the Hi-Fi audio level control VR (CH1, CH2) on the Front Panel to the center click position.
2. Set the audio output select switch to Hi-Fi mode.
3. Supply 1KHz, -8dBv sinewave signal to audio input.
4. Connect the V.T.V.M. to audio output.
5. Adjust VR4501 (CH1), VR4502 (CH2) so that the levels become -8.0dBv ± 0.2dBv.
6. Set the audio output select switch to NORM mode.
7. Confirm the CH1 and CH2 levels are -8.0dBv ± 1.0dBv.

4-3-23. AUDIO LEVEL METER ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO LEVEL METER
ADJ	CH1 : VR4505(B-3), CH2 : VR4506(B-3)
TAPE	
INPUT	1KHz,-8dBv(1.13Vp-p) SINEWAVE SIGNAL
MODE	STOP
M.EQ	
SPEC	Hi-Fi : 0dB, NORM : 0dB

Note: This adjustment should be performed only after completion of 4-3-22. PRE-AMPLIFIER ADJ.

1. Set the audio output select switch to Hi-Fi mode.
2. Set the Hi-Fi audio level control VR (CH1, CH2) on the Front Panel to the center click position.
3. Supply 1KHz, -8dBv sinewave signal to audio inputs (CH1, CH2).
4. Adjust VR4505 (CH1) and VR4506 (CH2) so that the Audio Level Meter shows 0dB as shown in Figure E21.

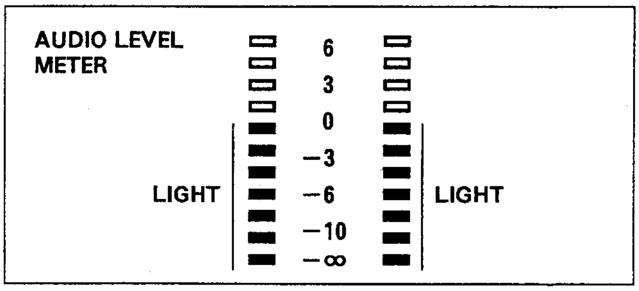


Figure E21

4-3-24. NORMAL AUDIO FREQUENCY RESPONSE ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO OUTPUT (CH1,CH2)
ADJ	CH1: VR4001(B-1), CH2: VR4003(B-1)
TAPE	VFM8080HQFP, PORTION : 5
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	400Hz = 5kHz (± 0.5dB)

1. Set the VR4002 and VR4004 to center position.
2. Set thte Aduio output select switch to NORM.
3. Connect a scope to Audio Outputs (CH1, CH2).
4. Adjust VR4001 (CH1) and VR4003 (CH2) so that the 400Hz and 5KHz levels becomes the same (0 ± 0.5dB) as shown in Figure E22.

Note: After this adjustment is finished, adjust 4-3-25. Normal Audio PB Gain Adj.

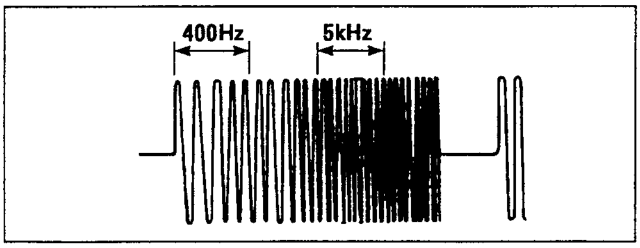


Figure E22

4-3-25. NORMAL AUDIO PLAYBACK GAIN ADJ.

BOARD	AUDIO P.C.B.
TP	CH1, CH2 AUDIO OUTPUT
ADJ	CH1 : VR4002(B-1), CH2 : VR4004(B-1)
TAPE	VFM8080HQFP, PORTION : 5
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	300mVp-p ± 15mV

Note: This adjustment should be performed only after completion of 4-3-24. Normal Audio Frequency Responce Adj.

1. Set the audio output select switch to NORM.
2. Connect the a scope to audio outputs (CH1,CH2).
3. Playback the alignment tape (portion : 5).
4. Adjust VR4002 (CH1) and VR4004 (CH2) so that the levels become 300mVp-p ± 15mV as shown in Figure E23.

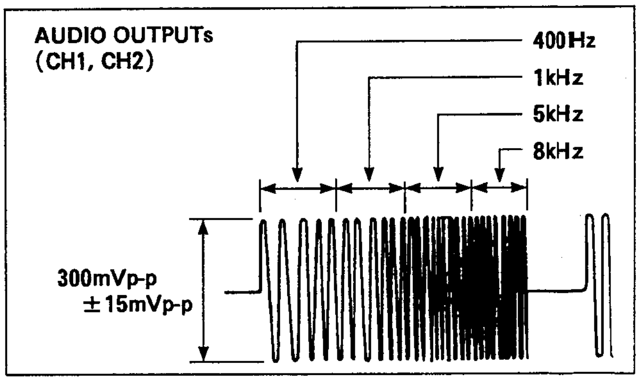


Figure E23

4-3-26. NORMAL AUDIO BIAS CURRENT ADJ.

BOARD	AUDIO C.B.A.
TP	A/C HEAD
ADJ	S-VHS:VR4007(CH1)(A-1),VR4008(CH2)(A-2)
TAPE	S-VHS, VHS BLANK TAPE
INPUT	COLOR BAR SIGNAL (LINE)
MODE	REC
M.EQ	V.T.V.M.
SPEC	S-VHS CH1: 6.0mVrms ± 0.1mVrms, CH2: 6.0mVrms ± 0.1mVrms VHS CH1: 4.0mVrms ± 0.3mVrms, CH2 4.0mVrms ± 0.3mVrms

1. Supply the color bar signal to video input.
2. Insert the S-VHS blank tape and place the deck in REC mode.
3. Connect the V.T.V.M. to the A/C head as shown in Figure E24.
4. Adjust VR4007 (CH1), VR4008 (CH2) so that the levels become 6.0mVrms ± 0.1mVrms.
5. Insert the VHS blank tape and place the deck in REC mode.
6. Confirm the CH1 and CH2 levels are 4.0mVrms ± 0.3mVrms.

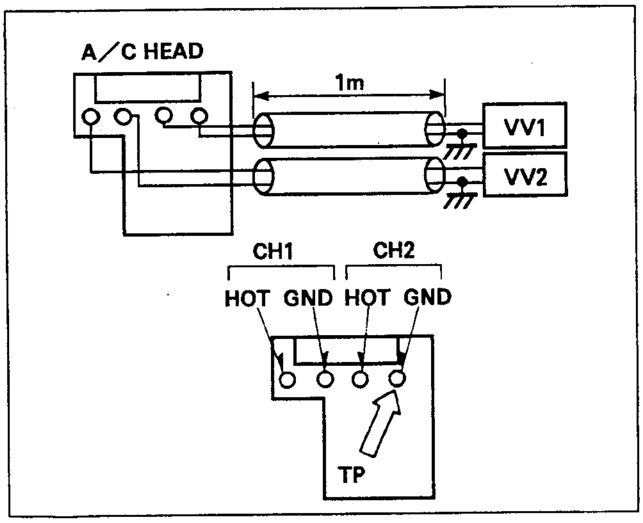


Figure E24

4-3-27. NORMAL AUDIO REC CURRENT ADJ.

BOARD	AUDIO C.B.A.
TP	AUDIO OUTPUT (CH1,CH2) TP4005(CH1)(C-1), TP4006(CH2)(B-1)
ADJ	VR4005(CH1)(C-1), VR4006(CH2)(D-1)
TAPE	S-VHS BLANK TAPE
INPUT	1KHz, -8dBv (1.13Vp-p) SINEWAVE
MODE	REC
M.EQ	V.T.V.M. (D.V.M.)
SPEC	

[SET UP]
S-VHS SW : ON

1. Set the audio output select switch to NORM.
2. Connect the V.T.V.Ms to the deck as shown in Figure E25. Note that only one channel will be adjusted at a time.
3. Supply a 1KHz, -8dBv sine wave signal to the AUDIO INPUT (CH1).
4. Place the deck in the REC mode with S-VHS mode.
5. Adjust VR4005 (CH1) so that V.T.V.M. (2) reads approximetely 0.5Vrms (1.41Vp-p).
6. Playback the recorded portion, and note the amount of difference between V.T.V.M. (1) and (2).
7. Place the deck in the REC mode again, and readjust VR4005 (CH1) slightly, and repeat step 5, nothing the new dirfference.
8. Repeat this "Record/Set/Note to Playback/Note" record and playback readings is minimized (0dBv ± 0.5dBv).
9. Repeat the above procedure again for channel 2, using the other set of test points and VRs.

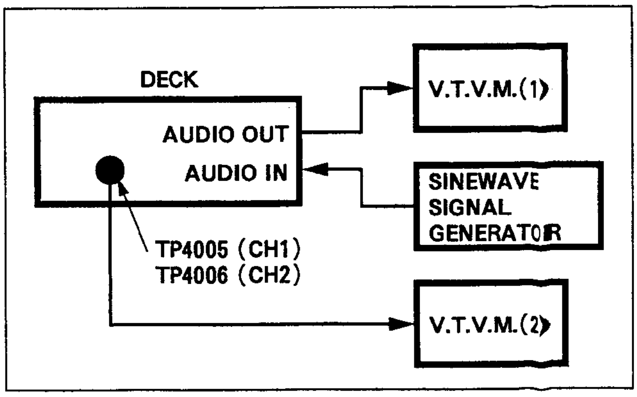


Figure E25

4-3-28. Hi-Fi AUDIO HEAD SWITCHING SHIFTER ADJ.

BOARD	AUDIO C.B.A.
TP	TP4501(C-1), TP4502(C-1)
ADJ	VR4507(D-1)
TAPE	VFM8080HQFP PORTION : 1
INPUT	
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC	SEE FIGURE

1. Connect the oscilloscope to TP4502 (FM H.SW) for CH1 and TP4501 (FM ENV) for CH2.
2. Playback the alignment tape (VFM8080HQFP) portion 1.
3. Adjust VR4507 so that there is no drop-out while push the Tracking buttons ("+" or "-") as shown in Figure E26.

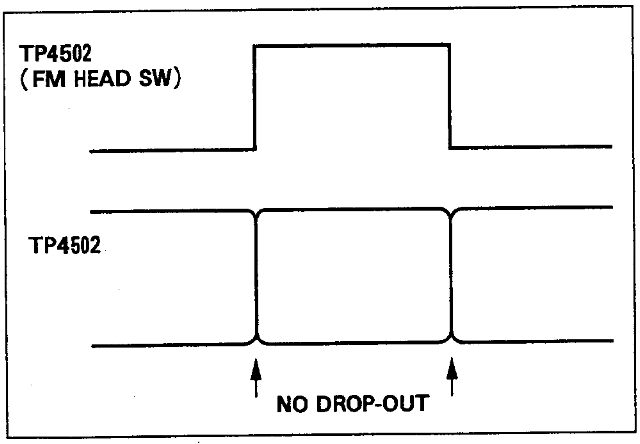


Figure E26

4-3-29. Hi-Fi AUDIO CARRIER FREQUENCY ADJ.

BOARD	FM AUDIO
TP	Pin25(CH1), Pin24(CH2) of FM AUDIO PACK
ADJ	VR4405 (CH1)(F-2), VR4402 (CH2)(E-4)
TAPE	
INPUT	NO SIGNAL
MODE	STOP
M.EQ	FREQUENCY COUNTER
SPEC	1.3MHz±10KHz(CH1), 1.7MHz±10KHz(CH2)

[SET UP]
HI-FI REC : ON (OSD)

1. Ground the Audio Inputs (CH1, CH2).
2. Counect a counter to pin25 of FM Audio Pack.
3. Adjust VR4405 (CH1) so that the frequency becomes 1.3MHz ± 10KHz.
4. Connect a counter to pin24 of FM Audio Pack.
5. Adjust VR4402 (CH2) so that the frequency becomes 1.7MHz ± 10KHz.

4-3-30. Hi-Fi AUDIO DEVIATION ADJ.

BOARD	FM AUDIO
TP	AUDIO OUTPUT (CH1, CH2)
ADJ	VR4407 (CH1)(E-1), VR4401 (CH2)(E-4)
TAPE	SELF RECORDED TAPE
INPUT	1KHz, -8dBv (1.13Vp-p) SINEWAVE
MODE	PLAY
M.EQ	V.T.V.M or OSCILLOSCOPE
SPEC	-8dBv ± 0.5dBv

[SET UP]
HI-FI REC : ON
AUDIO OUT : Hi-Fi

1. Set the Hi-Fi audio level control VR (CH1, CH2) on the Front Panel to the center click position.
2. Supply 1KHz, -8dBv sinewave signal to the audio inputs (CH1, CH2).
3. Record it for a few minutes.
4. Playback the recorded portion.
5. Connect a scope to the Audio outputs (CH1, CH2).
6. Adjust VR4407 (CH1) so that the level becomes -8dBv ± 0.5dBv.
7. Adjust VR4401 (CH2) so that the level becomes -8dBv ± 0.5dBv.

4-3-31. Hi-Fi AUDIO REC CURRENT ADJ.

BOARD	AUDIO
TP	TP5001(B-2)
ADJ	VR4503(C-1), VR4504(C-1)
TAPE	S-VHS SELF RECORD TAPE
INPUT	NO SIGNAL
MODE	
M.EQ	OSCILLOSCOPE
SPEC	CH1: 80mVp-p ± 5mVp-p, CH2: 260mVp-p ± 5mVp-p

[SET UP]
HI-FI REC : ON

1. Insert the S-VHS blank tape and place the deck in REC mode.
2. Connect the oscilloscope to TP5001.
3. Turn VR4504 fully counter-clockwise.
4. Adjust VR4503 so that the level becomes 80mVp-p ± 5mVp-p as shown in Figure E27.
5. Adjust VR4504 so that the level become 260mVp-p ± 5mVp-p as shown in Figure E28.

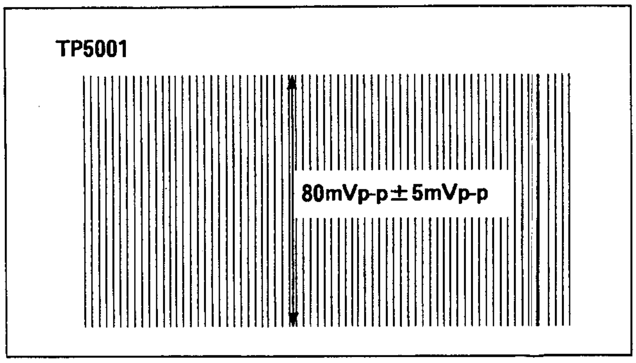


Figure E27

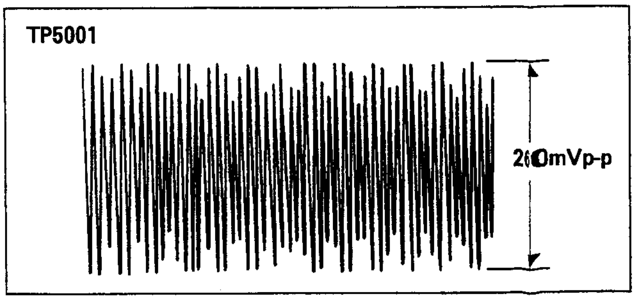


Figure E28

SECTION 5

BLOCK DIAGRAMS

CONTENTS

ABBREVIATION CHART BLK-2, 3

OVERALL BLOCK DIAGRAM BLK-4

SYSTEM CONTROL BLOCK DIAGRAM BLK-5

SERVO BLOCK DIAGRAM BLK-6

REEL DRIVE BLOCK DIAGRAM BLK-7

FRONT (1 ~ 4) BLOCK DIAGRAM BLK-8

VIDEO (1) BLOCK DIAGRAM BLK-9

VIDEO (2), (3) BLOCK DIAGRAM BLK-10

ABBREVIATION CHART

	NAME	SIGNAL
A	A 12V	ANALOG 12V DC
	A 5V	ANALOG 4V DC
	A GND	ANALOG GROUND
	A H SW	ARTIFICAL VERTICAL SYNC SIGNAL
	ART V	ARTIFICAL VERTICAL SYNC SIGNAL
	A. HEAD L	AUDIO HEAD (L)
	A. HEAD C	AUDIO HEAD (C)
	A. HEAD R	AUDIO HEAD (R)
C	CH2 PHONE	HEAD PHONES OUTPUT (CH2)
	CH1 PHONE	HEAD PHONES OUTPUT (CH1)
	CAP VM	CAPSTAN MOTOR VOLTAGE
	CUL	CAPSTAN SPEED CONTROL SIGNAL
	CAP RSF	CAPSTAN MOTOR REVERSE /STOP/FORWARD
	CAP ET	CAPSTAN MOTOR ERROR TORQUE CONTROL
	CAP FG1	CAPSTAN FG1 PULSE
	CAP FG2	CAPSTAN FG2 PULSE
	CYL ET	CYLINDER MOTOR ERROR TORQUE CONTROL
	CYL PFG	CYLINDER PG/FG PULSE
	CAP ON H	CAPSTAN MOTOR ON (H)
	CAP REV H	CAPSTAN REVERSE (H)
	CTL PULSE	CONTROL PULSE
	CAP FG	CAPSTAN FG PULSE
	CH2 AE L	CH2 AUDIO ERASE (L)
	CH1 AE L	CH1 AUDIO ERASE (L)
	CH2 MUTE H	CH2 AUDIO MUTE (H)
	CH2 DREC L	CH2 DELATED FM RECORDING (L)
	CH2 EE L	CH2 AUDIO-RECORDING (L)
	CH1 MUTE H	CH1 AUDIO MUTE (H)
	CH1 D REC L	CH1 DELATED FM RECORDING (L)
	CH1 EE L	CH1 AUDIO RECORDING (L)
	CAS SW	CASSETTE SWITCH
	CH2 METER	CH2 METER SIGNAL
	CH1 METER	CH1 METER SIGNAL
	CORR	CORREATION SIGNAL
	COMB Y	COMBINATION LUMINANCE SIGNAL
	COMB C	COMBINATION CHROMINANCE SIGNAL
	CH2 EE H	CH2 AUDIO RECORDING H
	CH1 LINE IN	CH1 AUDIO LINE IN SIGNAL
	CH2 LINE IN	CH2 AUDIO LINE IN SIGNAL
	CH1 PHONE	CH1 PHONE SIGNAL
	CH2 PHONE	CH2 PHONE SIGNAL
	CH1 MUT H	CH1 AUDIO MUTE (H)
	CH2 MUT H	CH2 AUDIO MUTE (H)

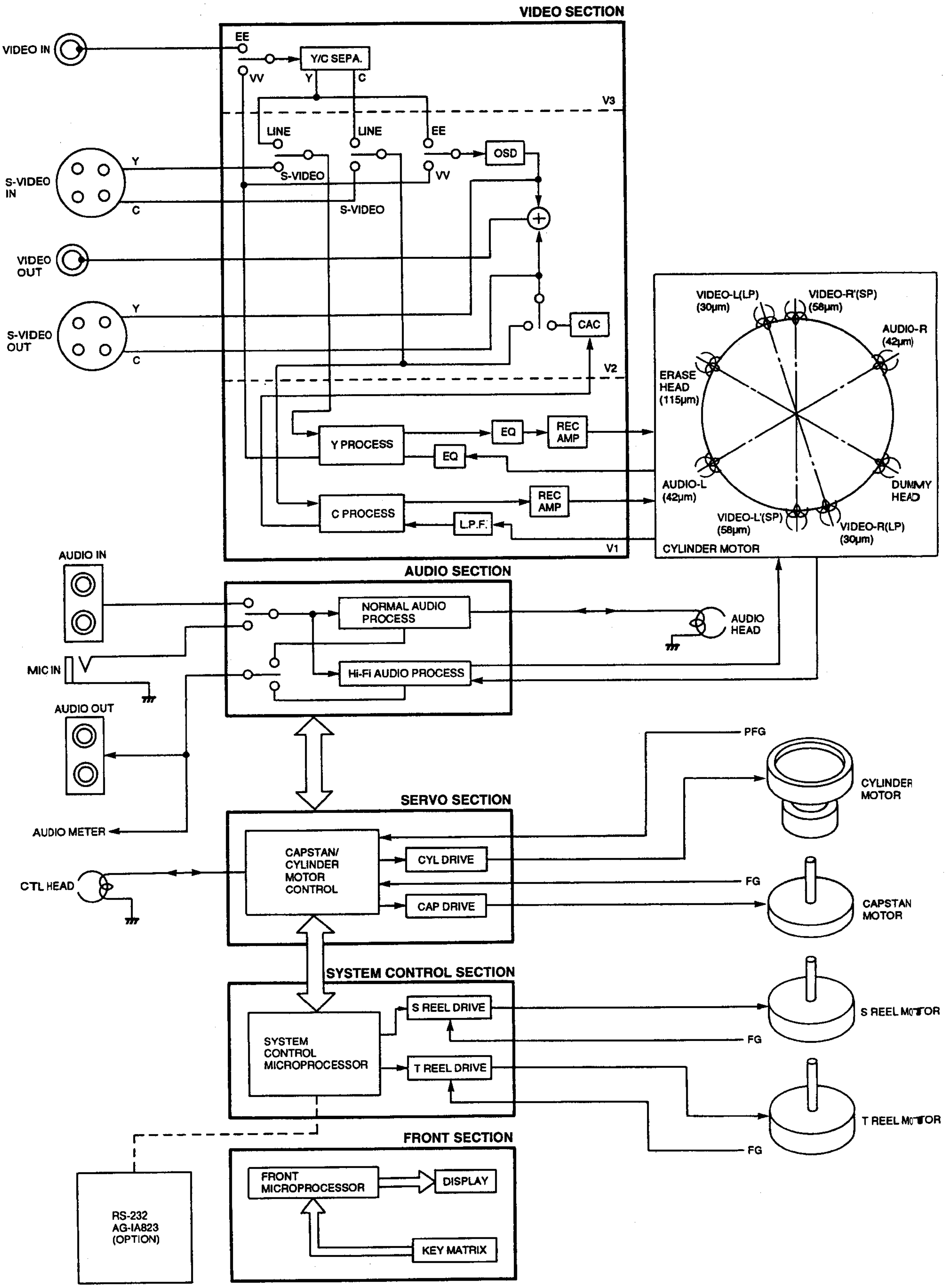
	NAME	SIGNAL
	CH2 DREC H	CH2 DELAYED RECORDING (H)
	CH1 AE HEAD	CH1 AUDIO ERASE HEAD
	CH2 AE HEAD	CH2 AUDIO ERASE HEAD
	CH1 LINE OUT	CH1 LINE OUTPUT
	CH2 LINE OUT	CH2 LINE OUTPUT
D	D GND	DIGITAL GROUND
	D 5V	DIGITAL VOLTAGE 5V
	D REC L	DELATED RECORDING (L)
	DEW	DEW
E	ENV SEL	RF ENVELOPE SELECT
	EDIT H	EDIT (H)
	EP L	LP (H)
	EXT SYNC	EXTERNAL SYNC SIGNAL
	EE H	RECORDING (H)
	EE 5V	RECORDING 5V
	EX REC 5V	EXTERNAL RECORDING 5V
	ENVE OUT	RF ENVELOPE SIGNAL OUT
F	FG1	FG1 PULSE
	FG2	FG2 PULSE
	FLY E H	FLYING ERASE (H)
	FSC	FS CLOCK SIGNAL
	FLY E HEAD	FLYING ERASE HEAD
	FLY E GND	FLYING ERASE GND
H	HSS	HORIZONTAL SYNC SIGNAL
	H SW	HEAD SWITCHING PULSE
	HIFI DREC H	DELATED FM RECORDING (H)
	HIFI MUTE H	FM AUDIO MUTE (H)
	HIFI H	FM AUDIO (H)
	HIFI VR REF	FM AUDIO RECORDING LEVEL REFERENCE
	HIFI CH2 VR	CH2 FM AUDIO RECORDING VOLUME
	HIFI CH1 VR	CH1 FM AUDIO RECORDING VOLUME
	HIFI CH2 OUT	CH2 FM AUDIO OUTPUT
	HIFI CH1 OUT	CH1 FM AUDIO OUTPUT
	HIFI PB H	FM AUDIO PLAYBACK (H)
	HIFI D REC (L)	FM DELAYED RECORDING (L)
	HEAD SW	HEAD SW PULSE
	H.A. SW	HEAD AMP SWITCHING PULSE
L	LINE OUT	AUDIO LINE OUT SIGNAL
M	MIC IN H	MICROPHONE SIGNAL
	MIC IN	MICROPHONE SIGNAL INPUT
	M GND	MOTOR GROUND
	MONITER NOR L	NORMAL AUDIO MONITER

ABBREVIATION CHART

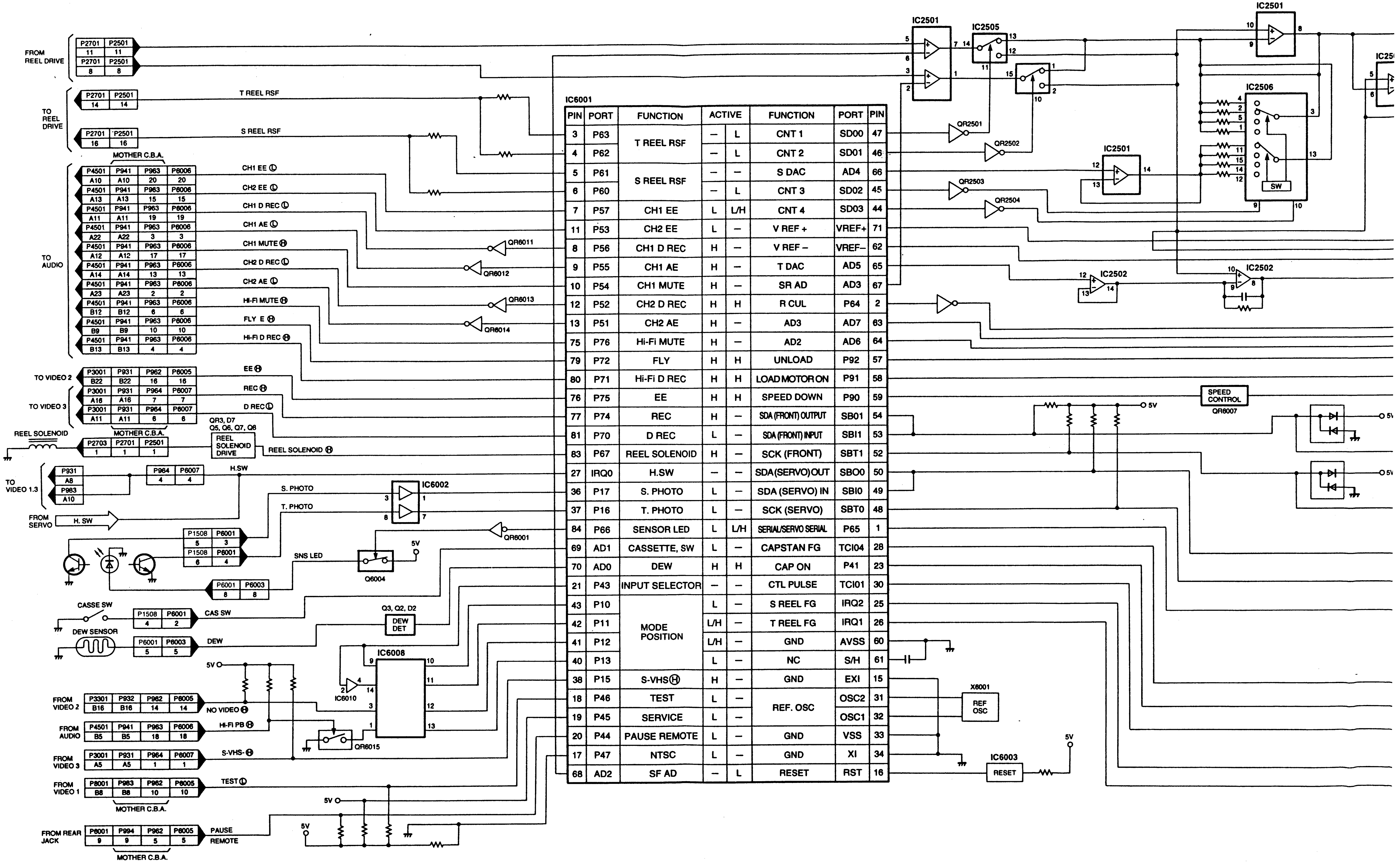
	NAME	SIGNAL
M	MONITOR CH1 H	FM AUDIO MONITER CH1 (H)
	MONITOR CH2 H	FM AUDIO MONITER CH2 (H)
	M 14V	MOTOR VOLTAGE 14V
	M 18V	MOTOR VOLTAGE 18V
	MON OUT	NORMAL AUDIO SIGNAL OUTPUT
	MON NOR L	LCH NORMAL AUDIO SIGNAL
N	NO VIDEO H	NON VIDEO SIGNAL DETECT (H)
	NOR CH1 OUT	CH1 NORMAL AUDIO SIGNAL
	NOR CH2 OUT	CH2 NORMAL AUDIO SIGNAL
	NOR R HEAD	NORMAL R-CH HEAD
	NOR L HEAD	NORMAL L-CH HEAD
P	PB CTL	PLAYBACK CONTROL SIGNAL
	PAUSE REMOTE	PAUSE REMOTE CONTROL SIGNAL
	POS PLAY	MECHANISUM POSITION SWITCH PLAY
	POS EJECT	MECHANISUM POSITION SWITCH EJECT
	POS STOP	MECHANISUM POSITION SWITCH STOP
	POS LOAD	MECHANISUM POSITION SWITCH LOAD
	PICT CTL	PICTURE CONTROL
	PB RF C	PLAYBACK RF CHROMINANCE SIGNAL
	PB EEY	PLAYBACK/RECORDING LUMINANCE SIGNAL
	PB C	PLAYBACK CHROMINANCE SIGNAL
	PLAY 5V	PLAY 5V
R	REEL SOL (H)	REEL SOLENOID ON (H)
	REG +12V	REGULATOR +12V
	ROTARY SW	ROTARY SWITCH
	REC H	RECORDING (H)
	REC C	RECORDING CHROMINANCE SIGNAL
	REC Y	RECORDING LUMINANCE SIGNAL
	REC RFC	RECORDING RF CHROMINANCE SIGNAL
	RE C	RF CHROMINANCE SIGNAL
	RF Y	RF LUMINANCE SIGNAL
	RF OUT	RF SIGNAL OUTPUT
	REC 12V	REC 12V
	REC IN	REC INPUT
	REC OUT	RECORDING OUTPUT
	RF IN	RF SIGNAL INPUT
	REG 5V	REG 5V

	NAME	SIGNAL
S	S REEL VM	SYPPLY REEL DRIVE VOLTAGE
	S REEL FG	SYPPLY REEL FG PULSE
	SR PHOTO	SYPPLY REEL PHOTO TRANSISTOR
	S REEL ET	SYPPLY REEL ERROR TORQUE CONTROL
	S REEL RSF	SYPPLY REEL REVERSE /STOP/FORWARD
	SS	SYNC SIGNAL
	SDA S	SERIAL DATA FOR SERVO
	SCK S	SERIAL CLOCK FOR SERVO
	S CASS L	VHS CASSETTE DETECT (L)
	S-VHS H	SVHS CASSETTE DETECT (H)
	SDA F	SERIAL DATA FOR FRONT
	SCK F	SERIAL CLOCK FOR FRONT
	SES LED	SENSOR LED
	SAFETY TAB (L)	SAFETY TAB SW ON (L)
	SES GND	SENSOR GROUND
T	T REEL VM	TAKE UP REEL DRIVE VOLTAGE
	T REEL FG	TAKE UP REEL FG PULSE
	T REEL RSF	TAKE UP REEL REVERSE /STOP/FORWARD
	TQU	TORQUE CONTROL
	T REEL ET	TAKE UP REEL ERROR TORQUE CONTROL
	TRACK ENV	TRACKING ENVELOPE
	TEST L	TEST (L)
	TRICK L	STILL, SEARCH MODE (L)
	TRICK (H)	STILL, SEARCH MODE (H)
V	V REF	REFERECE VOLTAGE
	VR GND	AUDIO VOLUME GROUND
	2.5V REF	2.5V REFERECE VOLTAGE
	4P C IN	4P CHROMINANCE SIGNAL INPUT
	4P Y IN	4P LUMINANCE SIGNAL INPUT
	4P C OUT	4P CHROMINANCE SIGNAL OUTPUT
	4P Y OUT	4P LUMINANCE SIGNAL OUTPUT
	5V	5V

OVERALL BLOCK DIAGRAM


VIDEO SECTION
VIDEO IN
EE
Y/C SEPA.
VV
Y
C
V3
LINE
LINE
EE
S-VIDEO IN
Y
C
S-VIDEO
OSD
VV
S-VIDEO
VIDEO OUT
S-VIDEO OUT
Y
C
CAC
V2
Y PROCESS
EQ
REC AMP
EQ
C PROCESS
REC AMP
L.P.F.
V1
VIDEO-L(LP) (30μm)
VIDEO-R'(SP) (58μm)
AUDIO-R (42μm)
ERASE HEAD (115μm)
AUDIO-L (42μm)
DUMMY HEAD
VIDEO-L'(SP) (58μm)
VIDEO-R(LP) (30μm)
CYLINDER MOTOR
AUDIO IN
AUDIO SECTION
NORMAL AUDIO PROCESS
AUDIO HEAD
MIC IN
Hi-Fi AUDIO PROCESS
AUDIO OUT
PFG
CYLINDER MOTOR
SERVO SECTION
AUDIO METER
CAPSTAN/ CYLINDER MOTOR CONTROL
CYL DRIVE
CTL HEAD
FG
CAP DRIVE
CAPSTAN MOTOR
SYSTEM CONTROL SECTION
S REEL DRIVE
S REEL MOTOR
SYSTEM CONTROL MICROPROCESSOR
FG
T REEL DRIVE
T REEL MOTOR
FG
FRONT SECTION
FRONT MICROPROCESSOR
DISPLAY
RS-232 AG-IA823 (OPTION)
KEY MATRIX

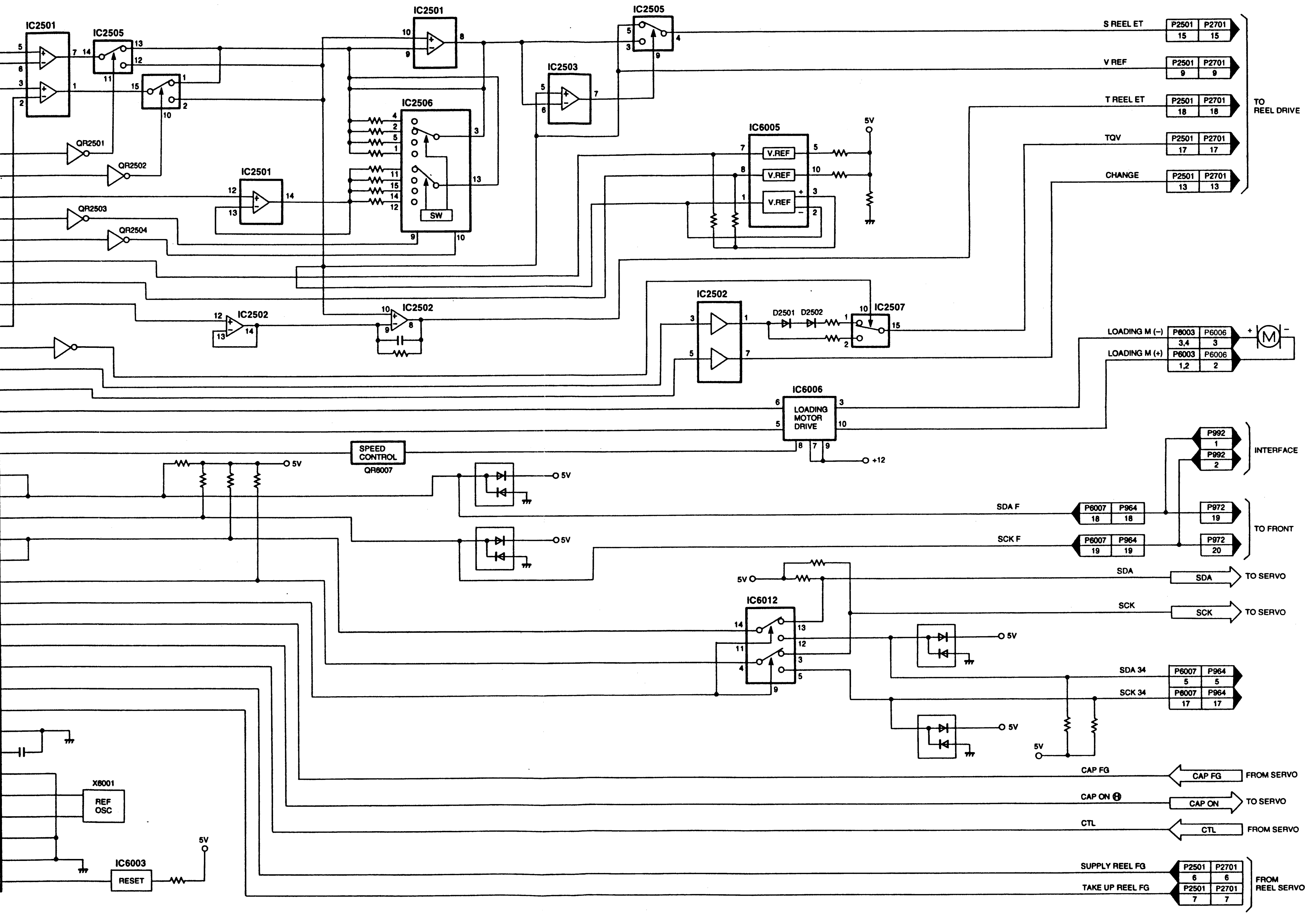
SYSTEM CONTROL BLOCK DIAGRAM


FROM REEL DRIVE
TO REEL DRIVE
T REEL RSF
S REEL RSF
MOTHER C.B.A.
TO AUDIO
CH1 EE Ⓛ
CH2 EE Ⓛ
CH1 D REC Ⓛ
CH1 AE Ⓛ
CH1 MUTE Ⓗ
CH2 D REC Ⓛ
CH2 AE Ⓛ
Hi-Fi MUTE Ⓗ
FLY E Ⓗ
Hi-Fi D REC Ⓗ
QR6011
QR6012
QR6013
QR6014
TO VIDEO 2
TO VIDEO 3
EE Ⓗ
REC Ⓗ
D REC Ⓛ
REEL SOLENOID
QR3, D7 Q5, Q6, Q7, Q8
REEL SOLENOID DRIVE
REEL SOLENOID Ⓗ
TO VIDEO 1.3
FROM SERVO
H. SW
H.SW
S. PHOTO
T. PHOTO
IC6002
QR6001
SNS LED
Q6004
5V
CASSE SW
CAS SW
DEW SENSOR
DEW
Q3, Q2, D2
DEW DET
IC6008
IC6010
5V
FROM VIDEO 2
NO VIDEO Ⓗ
FROM AUDIO
Hi-Fi PB Ⓗ
FROM VIDEO 3
S-VHS Ⓗ
QR6015
FROM VIDEO 1
TEST Ⓛ
FROM REAR JACK
PAUSE REMOTE
IC6001
IC2501
IC2505
IC2506
IC2502
QR2501
QR2502
QR2503
QR2504
SW
SPEED CONTROL
QR6007
X6001
REF OSC
IC6003
RESET

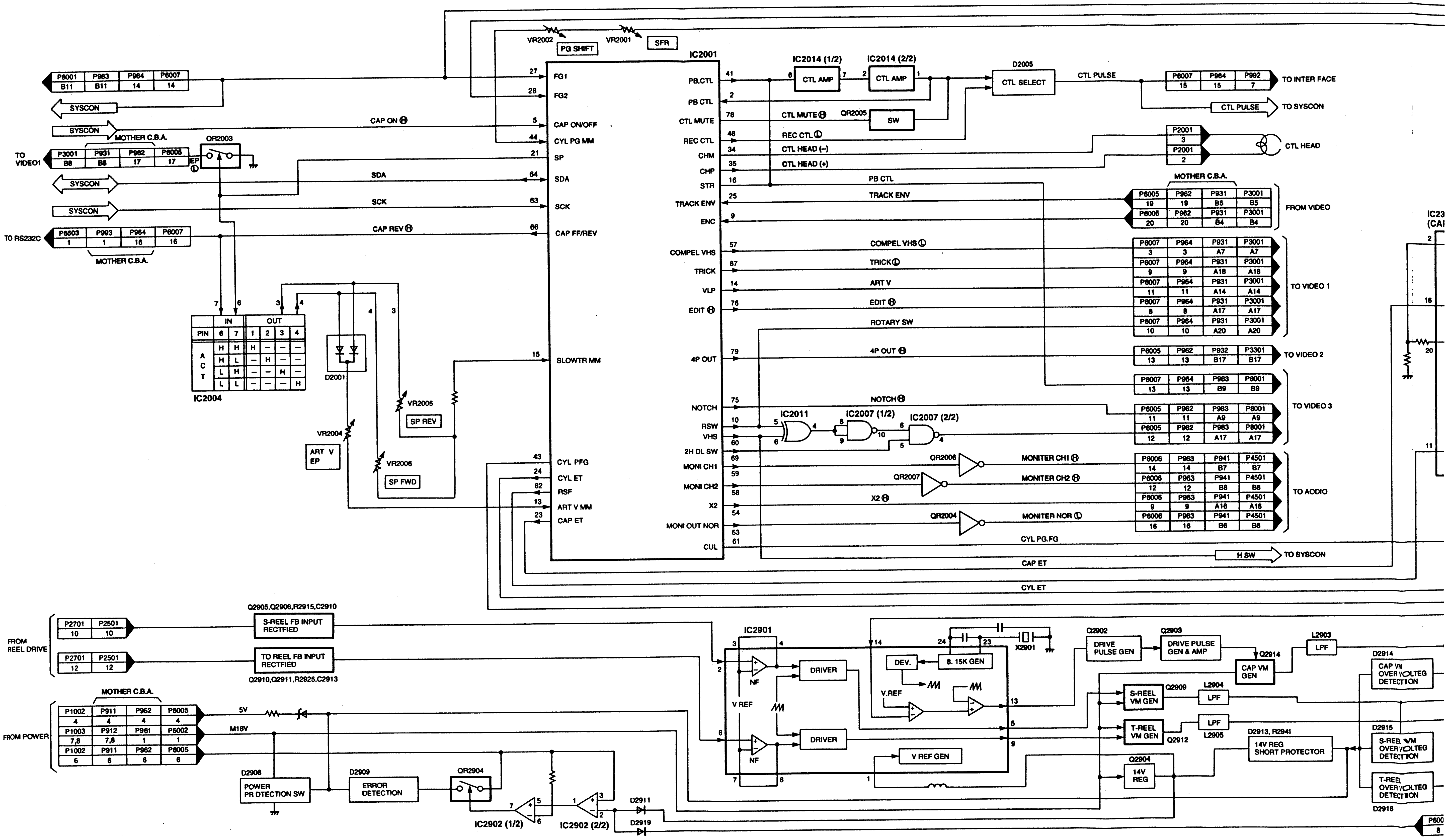
IC6001

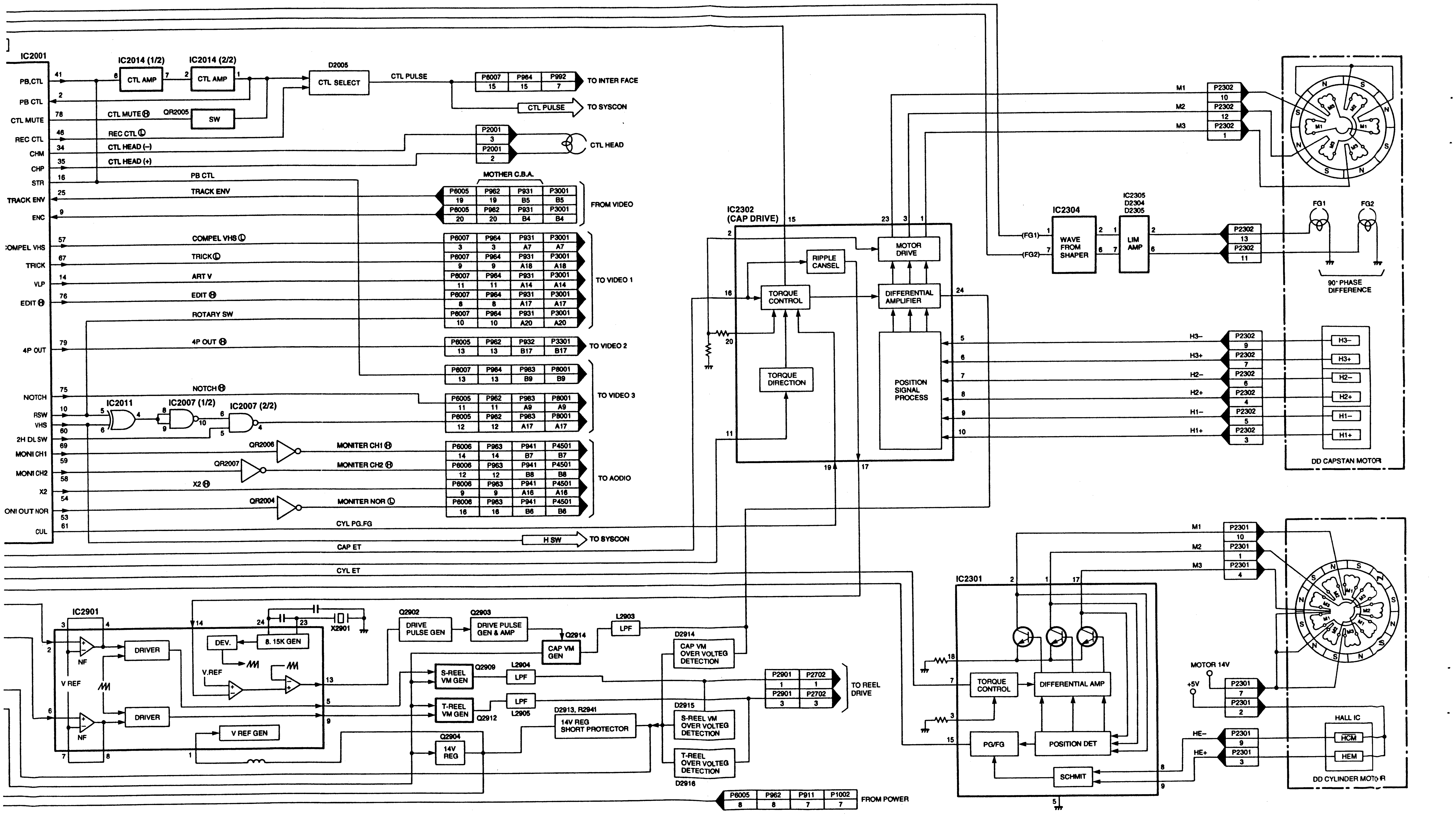
PIN	PORT	FUNCTION	ACTIVE		FUNCTION	PORT	PIN
3	P63	T REEL RSF	–	L	CNT 1	SD00	47
4	P62		–	L	CNT 2	SD01	46
5	P61	S REEL RSF	–	–	S DAC	AD4	66
6	P60		–	L	CNT 3	SD02	45
7	P57	CH1 EE	L	L/H	CNT 4	SD03	44
11	P53	CH2 EE	L	–	V REF +	VREF+	71
8	P56	CH1 D REC	H	–	V REF –	VREF–	62
9	P55	CH1 AE	H	–	T DAC	AD5	65
10	P54	CH1 MUTE	H	–	SR AD	AD3	67
12	P52	CH2 D REC	H	H	R CUL	P64	2
13	P51	CH2 AE	H	–	AD3	AD7	63
75	P76	Hi-Fi MUTE	H	–	AD2	AD6	64
79	P72	FLY	H	H	UNLOAD	P92	57
80	P71	Hi-Fi D REC	H	H	LOAD MOTOR ON	P91	58
76	P75	EE	H	H	SPEED DOWN	P90	59
77	P74	REC	H	–	SDA (FRONT) OUTPUT	SB01	54
81	P70	D REC	L	–	SDA (FRONT) INPUT	SBI1	53
83	P67	REEL SOLENOID	H	–	SCK (FRONT)	SBT1	52
27	IRQ0	H.SW	–	–	SDA (SERVO) OUT	SBO0	50
36	P17	S. PHOTO	L	–	SDA (SERVO) IN	SBI0	49
37	P16	T. PHOTO	L	–	SCK (SERVO)	SBT0	48
84	P66	SENSOR LED	L	L/H	SERIAL/SERVO SERIAL	P65	1
69	AD1	CASSETTE, SW	L	–	CAPSTAN FG	TCI04	28
70	AD0	DEW	H	H	CAP ON	P41	23
21	P43	INPUT SELECTOR	–	–	CTL PULSE	TCI01	30
43	P10	MODE POSITION	L	–	S REEL FG	IRQ2	25
42	P11		L/H	–	T REEL FG	IRQ1	26
41	P12		L/H	–	GND	AVSS	60
40	P13		L	–	NC	S/H	61
38	P15	S-VHS Ⓗ	H	–	GND	EXI	15
18	P46	TEST	L	–	REF. OSC	OSC2	31
19	P45	SERVICE	L	–		OSC1	32
20	P44	PAUSE REMOTE	L	–	GND	VSS	33
17	P47	NTSC	L	–	GND	XI	34
68	AD2	SF AD	–	L	RESET	RST	16

ICTION	ACTIVE		FUNCTION	PORT	PIN
EL RSF	–	L	CNT 1	SD00	47
	–	L	CNT 2	SD01	46
EL RSF	–	–	S DAC	AD4	66
	–	L	CNT 3	SD02	45
H1 EE	L	L/H	CNT 4	SD03	44
H2 EE	L	–	V REF +	VREF+	71
D REC	H	–	V REF –	VREF–	62
H1 AE	H	–	T DAC	AD5	65
1 MUTE	H	–	SR AD	AD3	67
2 D REC	H	H	R CUL	P64	2
H2 AE	H	–	AD3	AD7	63
i MUTE	H	–	AD2	AD6	64
FLY	H	H	UNLOAD	P92	57
i D REC	H	H	LOAD MOTOR ON	P91	58
EE	H	H	SPEED DOWN	P90	59
REC	H	–	SDA (FRONT) OUTPUT	SB01	54
REC	L	–	SDA (FRONT) INPUT	SBI1	53
SOLENOID	H	–	SCK (FRONT)	SBT1	52
H.SW	–	–	SDA(SERVO) OUT	SBO0	50
PHOTO	L	–	SDA (SERVO) IN	SBI0	49
PHOTO	L	–	SCK (SERVO)	SBT0	48
SOR LED	L	L/H	SERIAL/SERVO SERIAL	P65	1
ETTE, SW	L	–	CAPSTAN FG	TCI04	28
DEW	H	H	CAP ON	P41	23
SELECTOR	–	–	CTL PULSE	TCI01	30
ODE OSITION	L	–	S REEL FG	IRQ2	25
	L/H	–	T REEL FG	IRQ1	26
	L/H	–	GND	AVSS	60
	L	–	NC	S/H	61
VHS Ⓗ	H	–	GND	EXI	15
TEST	L	–	REF. OSC	OSC2	31
ERVICE	L	–		OSC1	32
E REMOTE	L	–	GND	VSS	33
NTSC	L	–	GND	XI	34
SF AD	–	L	RESET	RST	16


IC2501
IC2505
IC2501
IC2505
IC2503
IC2506
SW
IC6005
V.REF
V.REF
V.REF
5V
QR2501
QR2502
QR2503
QR2504
IC2501
IC2502
IC2502
IC2502
IC2507
D2501
D2502
IC6006
LOADING MOTOR DRIVE
+12
SPEED CONTROL
QR6007
5V
5V
5V
IC6012
5V
5V
5V
X6001
REF OSC
IC6003
RESET
5V
S REEL ET
P2501 15
P2701 15
V REF
P2501 9
P2701 9
T REEL ET
P2501 18
P2701 18
TQV
P2501 17
P2701 17
CHANGE
P2501 13
P2701 13
TO REEL DRIVE
LOADING M (–)
P6003 3,4
P6006 3
LOADING M (+)
P6003 1,2
P6006 2
M
P992 1
P992 2
INTERFACE
SDA F
P6007 18
P964 18
P972 19
SCK F
P6007 19
P964 19
P972 20
TO FRONT
SDA
SDA
TO SERVO
SCK
SCK
TO SERVO
SDA 34
P6007 5
P964 5
SCK 34
P6007 17
P964 17
CAP FG
CAP FG
FROM SERVO
CAP ON Ⓗ
CAP ON
TO SERVO
CTL
CTL
FROM SERVO
SUPPLY REEL FG
P2501 6
P2701 6
TAKE UP REEL FG
P2501 7
P2701 7
FROM REEL SERVO

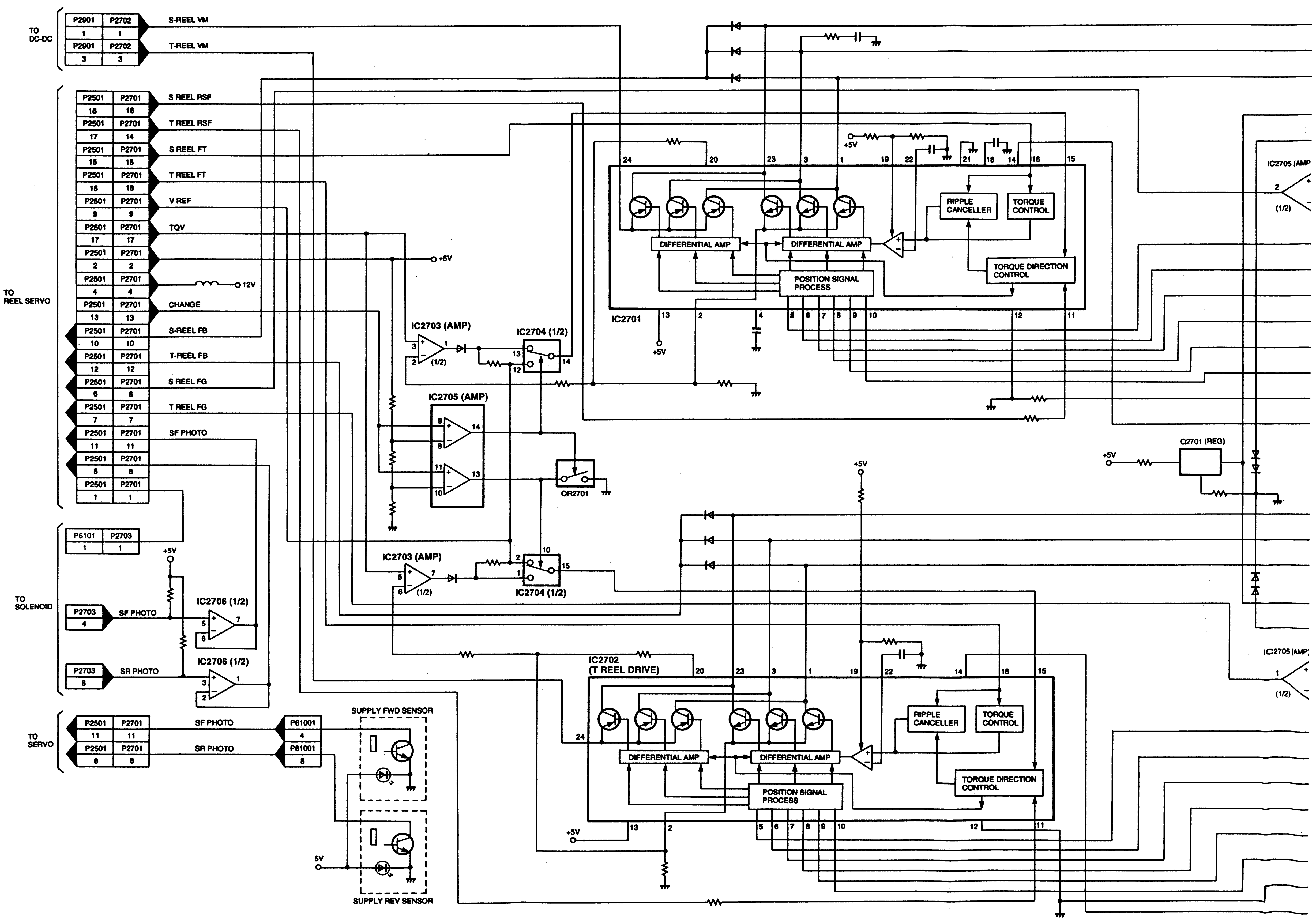
SERVO BLOCK DIAGRAM


IC2001
FG1
FG2
CAP ON/OFF
CYL PG MM
SP
SDA
SCK
CAP FF/REV
SLOWTR MM
CYL PFG
CYL ET
RSF
ART V MM
CAP ET
PB.CTL
PB CTL
CTL MUTE
REC CTL
CHM
CHP
STR
TRACK ENV
ENC
COMPEL VHS
TRICK
VLP
EDIT
4P OUT
NOTCH
RSW
VHS
2H DL SW
MONI CH1
MONI CH2
X2
MONI OUT NOR
CUL
VR2002
PG SHIFT
VR2001
SFR
P8001 P963 P964 P6007
B11 B11 14 14
SYSCON
CAP ON
MOTHER C.B.A.
QR2003
TO VIDEO1
P3001 P931 P962 P6005
B8 B8 17 17
EP
SDA
SCK
CAP REV
TO RS232C
P8503 P993 P964 P6007
1 1 16 16
IC2004
IN OUT
PIN 6 7 1 2 3 4
ACT
H H H — — —
H L — H — —
L H — — H —
L L — — — H
D2001
VR2004
ART V EP
VR2005
SP REV
VR2006
SP FWD
IC2014 (1/2)
CTL AMP
IC2014 (2/2)
CTL AMP
D2005
CTL SELECT
CTL PULSE
P6007 P964 P992
15 15 7
TO INTER FACE
CTL PULSE
TO SYSCON
CTL MUTE
QR2005
SW
REC CTL
CTL HEAD (−)
CTL HEAD (+)
P2001 3
P2001 2
CTL HEAD
PB CTL
TRACK ENV
P6005 P962 P931 P3001
19 19 B5 B5
20 20 B4 B4
FROM VIDEO
COMPEL VHS
TRICK
ART V
EDIT
ROTARY SW
P6007 P964 P931 P3001
3 3 A7 A7
9 9 A18 A18
11 11 A14 A14
8 8 A17 A17
10 10 A20 A20
TO VIDEO 1
4P OUT
P6005 P962 P932 P3301
13 13 B17 B17
TO VIDEO 2
P6007 P964 P983 P8001
13 13 B9 B9
NOTCH
P6005 P962 P983 P8001
11 11 A9 A9
12 12 A17 A17
TO VIDEO 3
IC2011
IC2007 (1/2)
IC2007 (2/2)
QR2006
MONITER CH1
QR2007
MONITER CH2
X2
QR2004
MONITER NOR
P6006 P963 P941 P4501
14 14 B7 B7
12 12 B8 B8
9 9 A16 A16
16 16 B6 B6
TO AODIO
CYL PG.FG
H SW
TO SYSCON
CAP ET
CYL ET
IC23
FROM REEL DRIVE
P2701 P2501
10 10
12 12
Q2905,Q2906,R2915,C2910
S-REEL FB INPUT RECTFIED
TO REEL FB INPUT RECTFIED
Q2910,Q2911,R2925,C2913
FROM POWER
MOTHER C.B.A.
P1002 P911 P962 P6005
4 4 4 4
P1003 P912 P961 P6002
7,8 7,8 1 1
P1002 P911 P962 P6005
6 6 6 6
5V
M18V
D2908
POWER PR DTECTION SW
D2909
ERROR DETECTION
QR2904
IC2902 (1/2)
IC2902 (2/2)
D2911
D2919
IC2901
NF
V REF
DRIVER
DRIVER
DEV.
8. 15K GEN
V.REF
V REF GEN
X2901
Q2902
DRIVE PULSE GEN
Q2903
DRIVE PULSE GEN & AMP
Q2914
CAP VM GEN
L2903
LPF
S-REEL VM GEN
Q2909
L2904
LPF
T-REEL VM GEN
Q2912
LPF
L2905
Q2904
14V REG
D2913, R2941
14V REG SHORT PROTECTOR
D2914
CAP VM OVER VOLTEG DETECTION
D2915
S-REEL VM OVER VOLTEG DETECTION
T-REEL OVER VOLTEG DETECTION
D2916
P600
8

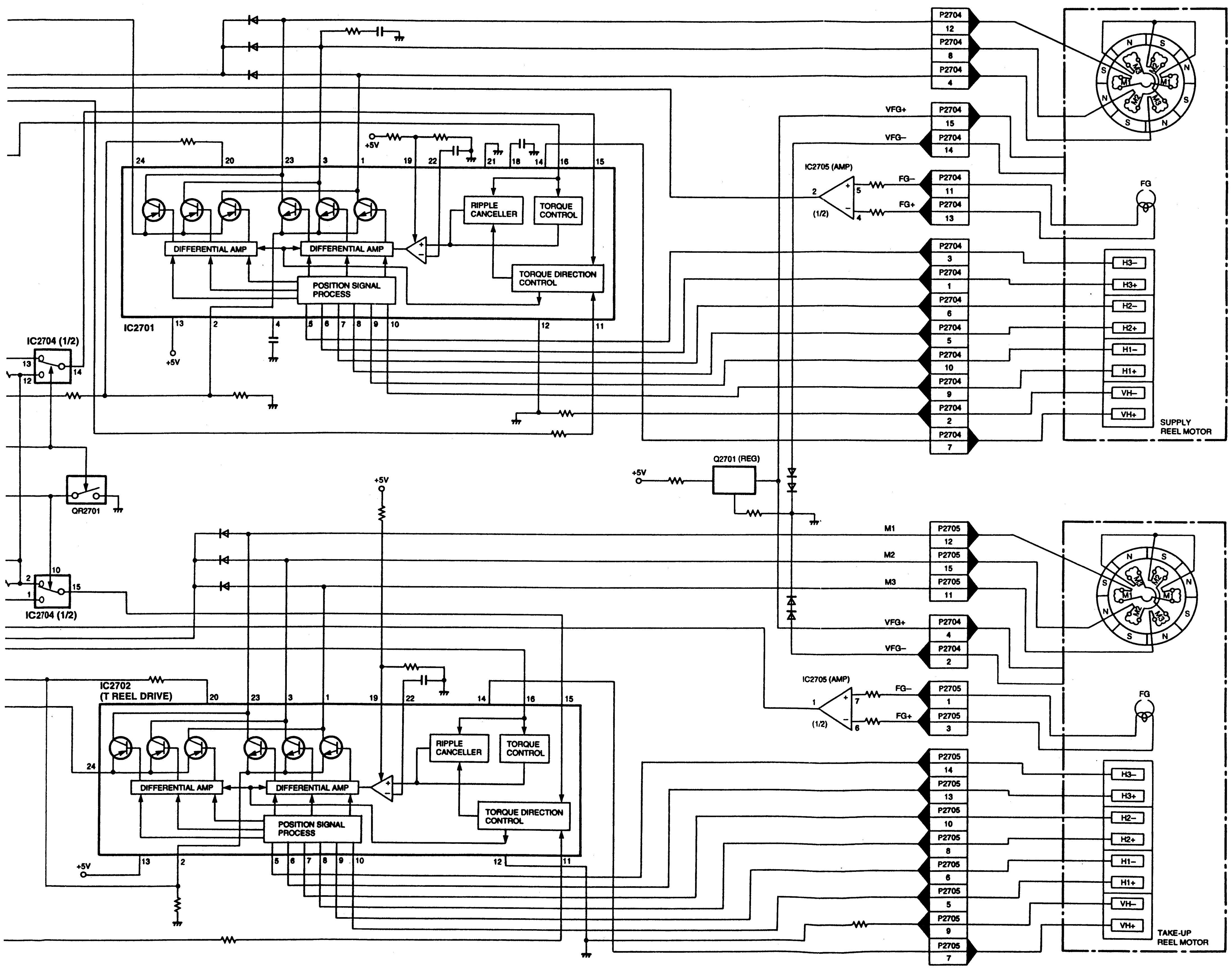

IC2001
PB.CTL
PB CTL
CTL MUTE
REC CTL
CHM
CHP
STR
TRACK ENV
ENC
COMPEL VHS
TRICK
VLP
EDIT
4P OUT
NOTCH
RSW
VHS
2H DL SW
MONI CH1
MONI CH2
X2
ONI OUT NOR
CUL
IC2014 (1/2)
CTL AMP
IC2014 (2/2)
CTL AMP
D2005
CTL SELECT
CTL PULSE
TO INTER FACE
CTL PULSE
TO SYSCON
CTL MUTE
QR2005
SW
REC CTL
CTL HEAD (–)
CTL HEAD (+)
P2001
CTL HEAD
PB CTL
MOTHER C.B.A.
TRACK ENV
FROM VIDEO
COMPEL VHS
TRICK
ART V
EDIT
ROTARY SW
TO VIDEO 1
4P OUT
TO VIDEO 2
NOTCH
TO VIDEO 3
IC2011
IC2007 (1/2)
IC2007 (2/2)
QR2006
MONITER CH1
QR2007
MONITER CH2
X2
TO AODIO
QR2004
MONITER NOR
CYL PG.FG
H SW
TO SYSCON
CAP ET
CYL ET
IC2302
(CAP DRIVE)
RIPPLE
CANSEL
MOTOR
DRIVE
TORQUE
CONTROL
DIFFERENTIAL
AMPLIFIER
TORQUE
DIRECTION
POSITION
SIGNAL
PROCESS
IC2304
WAVE
FROM
SHAPER
IC2305
D2304
D2305
LIM
AMP
(FG1)
(FG2)
P2302
FG1
FG2
90° PHASE
DIFFERENCE
M1
M2
M3
H3–
H3+
H2–
H2+
H1–
H1+
DD CAPSTAN MOTOR
IC2901
V REF
NF
DRIVER
DRIVER
DEV.
8. 15K GEN
V.REF
V REF GEN
X2901
Q2902
DRIVE
PULSE GEN
Q2903
DRIVE PULSE
GEN & AMP
Q2914
CAP VM
GEN
L2903
LPF
D2914
CAP VM
OVER VOLTEG
DETECTION
S-REEL
VM GEN
Q2909
L2904
LPF
T-REEL
VM GEN
Q2912
LPF
L2905
D2913, R2941
14V REG
SHORT PROTECTOR
D2915
S-REEL VM
OVER VOLTEG
DETECTION
T-REEL
OVER VOLTEG
DETECTION
D2916
Q2904
14V
REG
P2901
P2702
TO REEL
DRIVE
P6005
P962
P911
P1002
FROM POWER
IC2301
TORQUE
CONTROL
DIFFERENTIAL AMP
PG/FG
POSITION DET
SCHMIT
P2301
MOTOR 14V
+5V
HE–
HE+
HALL IC
HCM
HEM
DD CYLINDER MOTOR

V23893 / Druck 4

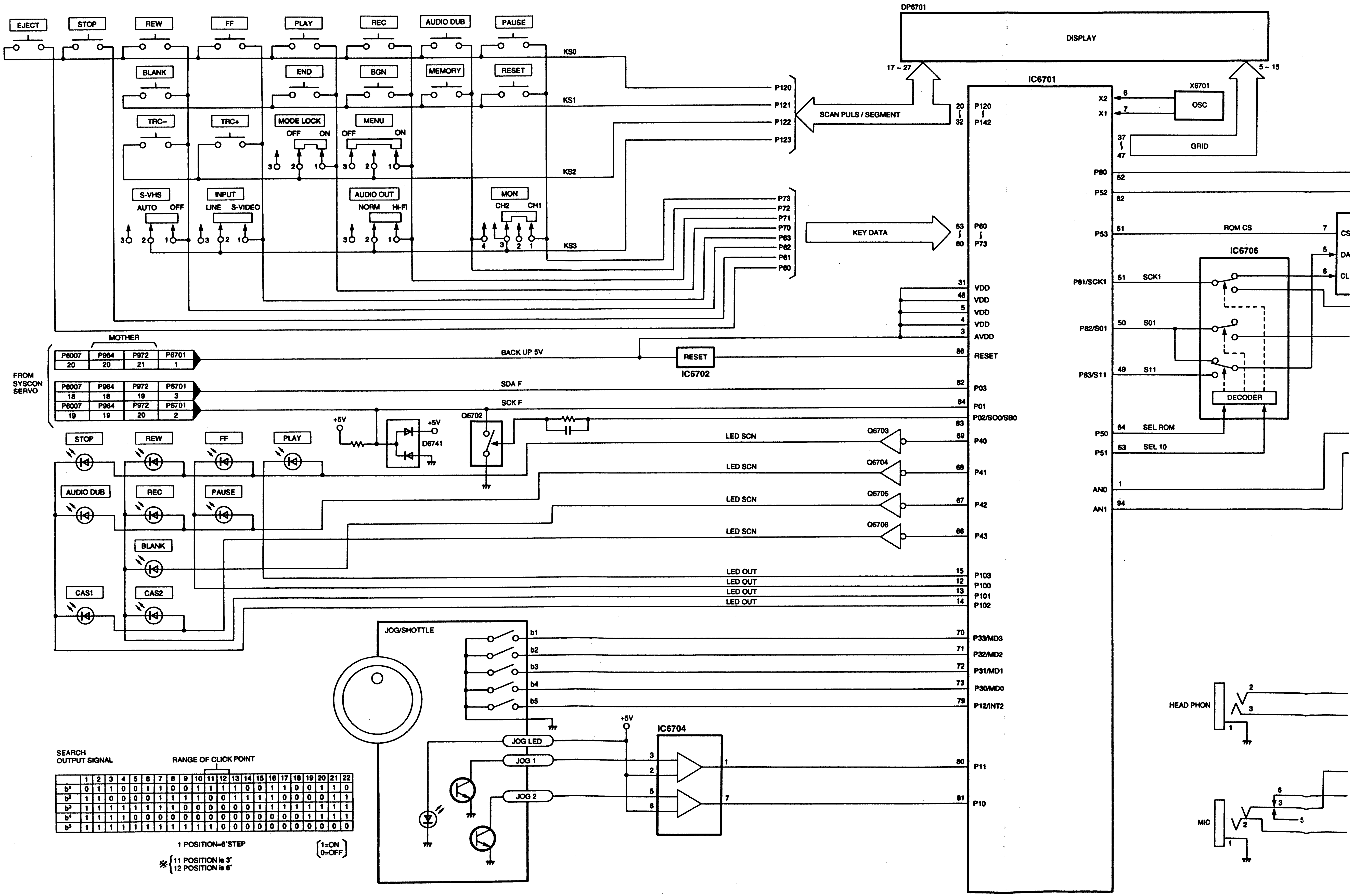
REEL DRIVE BLOCK DIAGRAM



TO DC-DC
P2901 P2702 1 1
P2901 P2702 3 3
S-REEL VM
T-REEL VM
TO REEL SERVO
P2501 P2701
S REEL RSF
T REEL RSF
S REEL FT
T REEL FT
V REF
TQV
CHANGE
S-REEL FB
T-REEL FB
S REEL FG
T REEL FG
SF PHOTO
+5V
12V
IC2703 (AMP)
IC2704 (1/2)
IC2705 (AMP)
QR2701
IC2701
RIPPLE CANCELLER
TORQUE CONTROL
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
TORQUE DIRECTION CONTROL
Q2701 (REG)
IC2705 (AMP)
(1/2)
P6101 P2703 1 1
TO SOLENOID
P2703 4
SF PHOTO
P2703 8
SR PHOTO
IC2706 (1/2)
TO SERVO
P2501 P2701 11 11
P2501 P2701 8 8
P61001 4
P61001 8
SUPPLY FWD SENSOR
SUPPLY REV SENSOR
5V
IC2702 (T REEL DRIVE)


P2704
12
8
4
15
14
11
13
3
1
6
5
10
9
2
7
VFG+
VFG−
FG−
FG+
IC2705 (AMP)
(1/2)
FG
SUPPLY
REEL MOTOR
H3−
H3+
H2−
H2+
H1−
H1+
VH−
VH+
IC2701
RIPPLE CANCELLER
TORQUE CONTROL
DIFFERENTIAL AMP
DIFFERENTIAL AMP
POSITION SIGNAL PROCESS
TORQUE DIRECTION CONTROL
+5V
IC2704 (1/2)
QR2701
Q2701 (REG)
M1
M2
M3
P2705
TAKE-UP
REEL MOTOR
IC2702
(T REEL DRIVE)
N
S
M1
M2
M3

FRONT (1-4) BLOCK DIAGRAM


EJECT
STOP
REW
FF
PLAY
REC
AUDIO DUB
PAUSE
KS0
BLANK
END
BGN
MEMORY
RESET
KS1
TRC–
TRC+
MODE LOCK
OFF ON
MENU
OFF ON
KS2
S-VHS
AUTO OFF
INPUT
LINE S-VIDEO
AUDIO OUT
NORM HI-FI
MON
CH2 CH1
KS3
P120
P121
P122
P123
P73
P72
P71
P70
P63
P62
P61
P60
DP6701
DISPLAY
17 ~ 27
5 ~ 15
SCAN PULS / SEGMENT
KEY DATA
IC6701
20 ~ 32 P120 ~ P142
53 ~ 60 P60 ~ P73
31 VDD
48 VDD
5 VDD
4 VDD
3 AVDD
86 RESET
82 P03
84 P01
83 P02/SO0/SB0
69 P40
68 P41
67 P42
66 P43
15 P103
12 P100
13 P101
14 P102
70 P33/MD3
71 P32/MD2
72 P31/MD1
73 P30/MD0
79 P12/INT2
80 P11
81 P10
X2 6
X1 7
X6701
OSC
37 ~ 47
GRID
P80 52
P52 62
P53 61
ROM CS
7 CS
5 DA
6 CL
IC6706
P81/SCK1 51 SCK1
P82/S01 50 S01
P83/S11 49 S11
DECODER
P50 64 SEL ROM
P51 63 SEL 10
AN0 1
AN1 94
MOTHER
P6007 P964 P972 P6701
20 20 21 1
FROM SYSCON SERVO
P6007 P964 P972 P6701
18 18 19 3
P6007 P964 P972 P6701
19 19 20 2
BACK UP 5V
RESET
IC6702
SDA F
SCK F
+5V
+5V
D6741
Q6702
LED SCN
Q6703
LED SCN
Q6704
LED SCN
Q6705
LED SCN
Q6706
LED OUT
LED OUT
LED OUT
LED OUT
STOP
REW
FF
PLAY
AUDIO DUB
REC
PAUSE
BLANK
CAS1
CAS2
JOG/SHOTTLE
b1
b2
b3
b4
b5
JOG LED
JOG 1
JOG 2
+5V
IC6704
3
2
5
6
1
7
HEAD PHON
2
3
1
MIC
6
3
5
2
1

SEARCH
OUTPUT SIGNAL

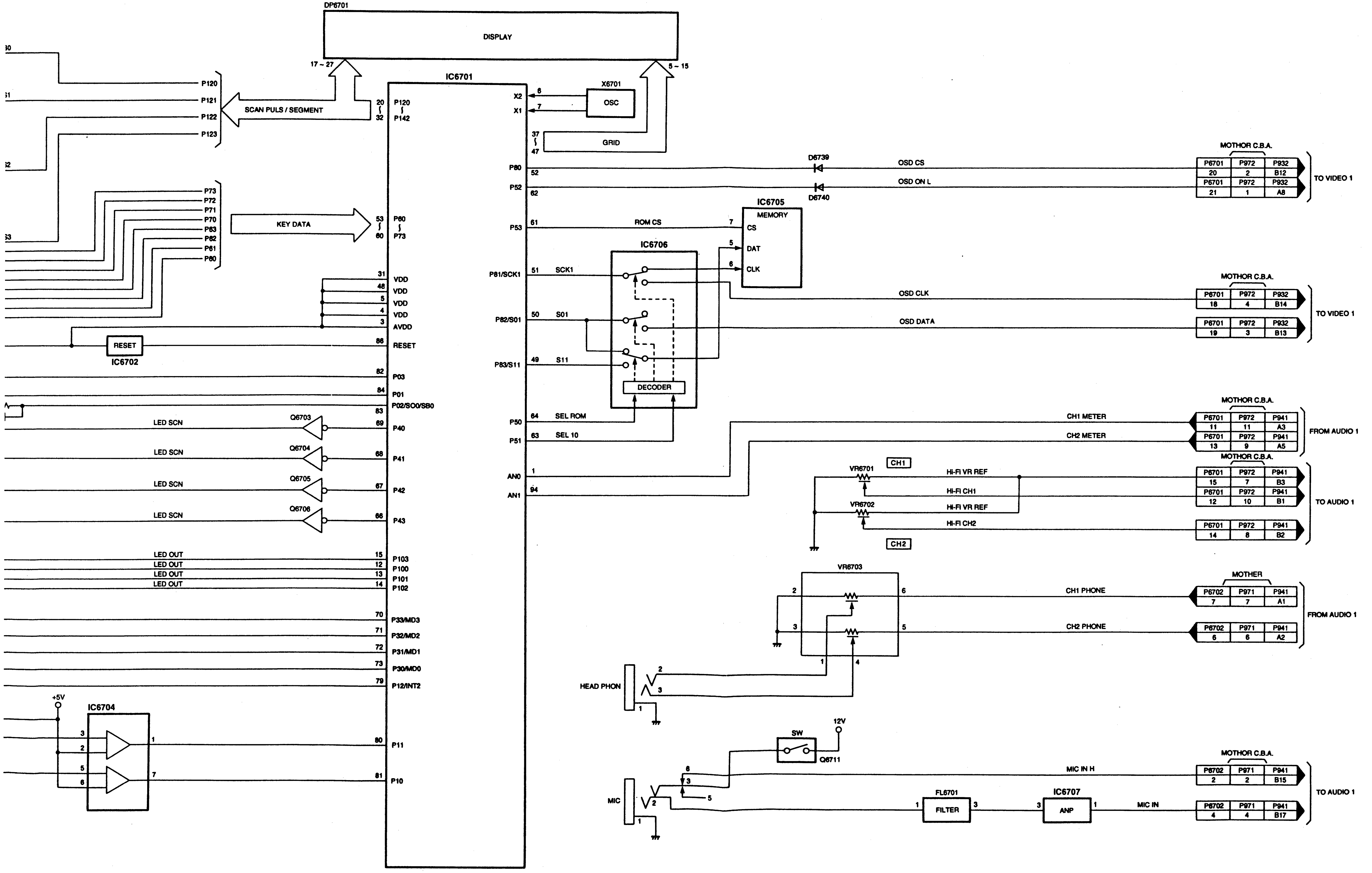
RANGE OF CLICK POINT

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
b^1	0	1	1	0	0	1	1	0	0	1	1	1	1	0	0	1	1	0	0	1	1	0
b^2	1	1	0	0	0	0	1	1	1	1	0	0	1	1	1	1	0	0	0	0	1	1
b^3	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1
b^4	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
b^5	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0

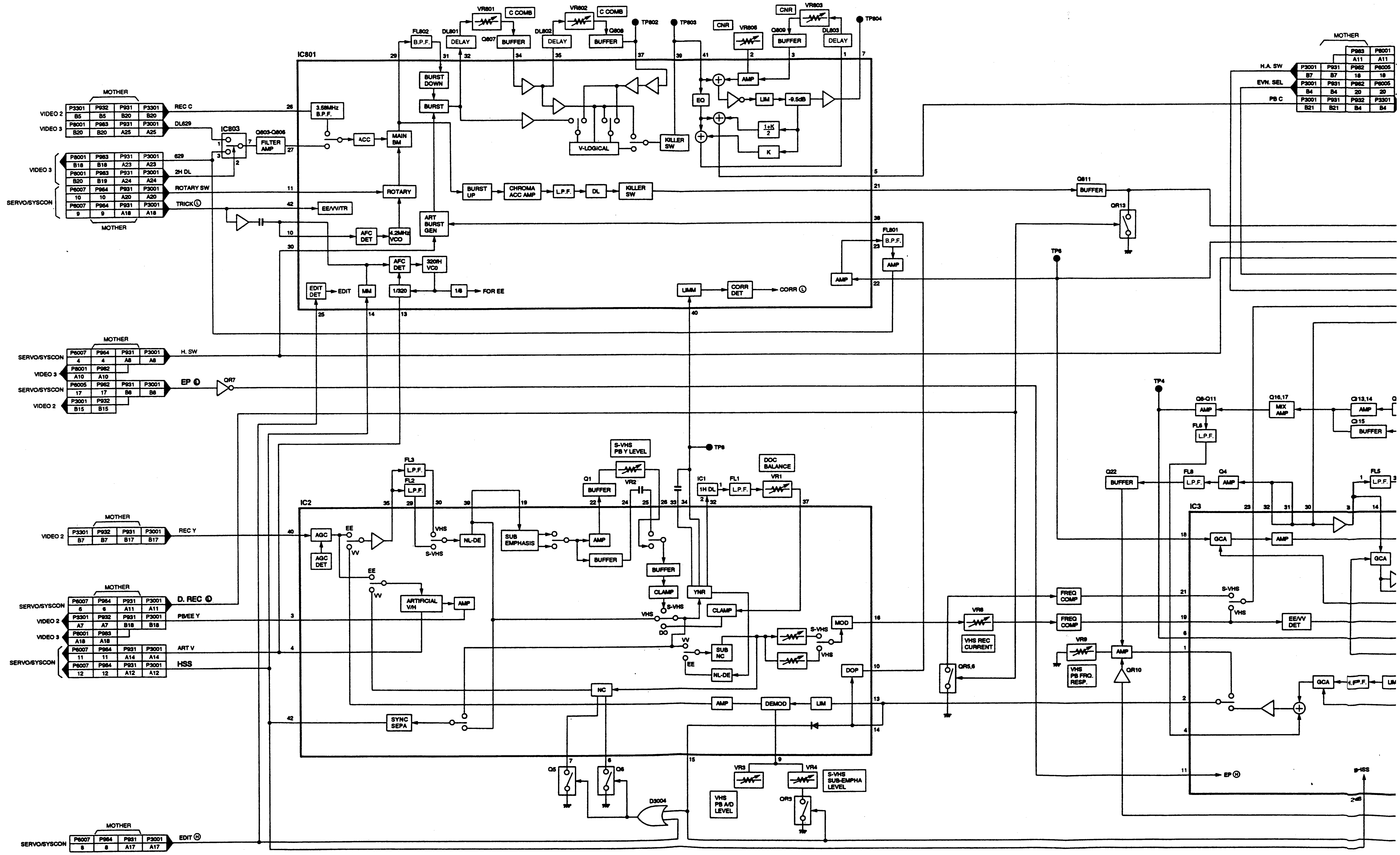
1 POSITION=6°STEP

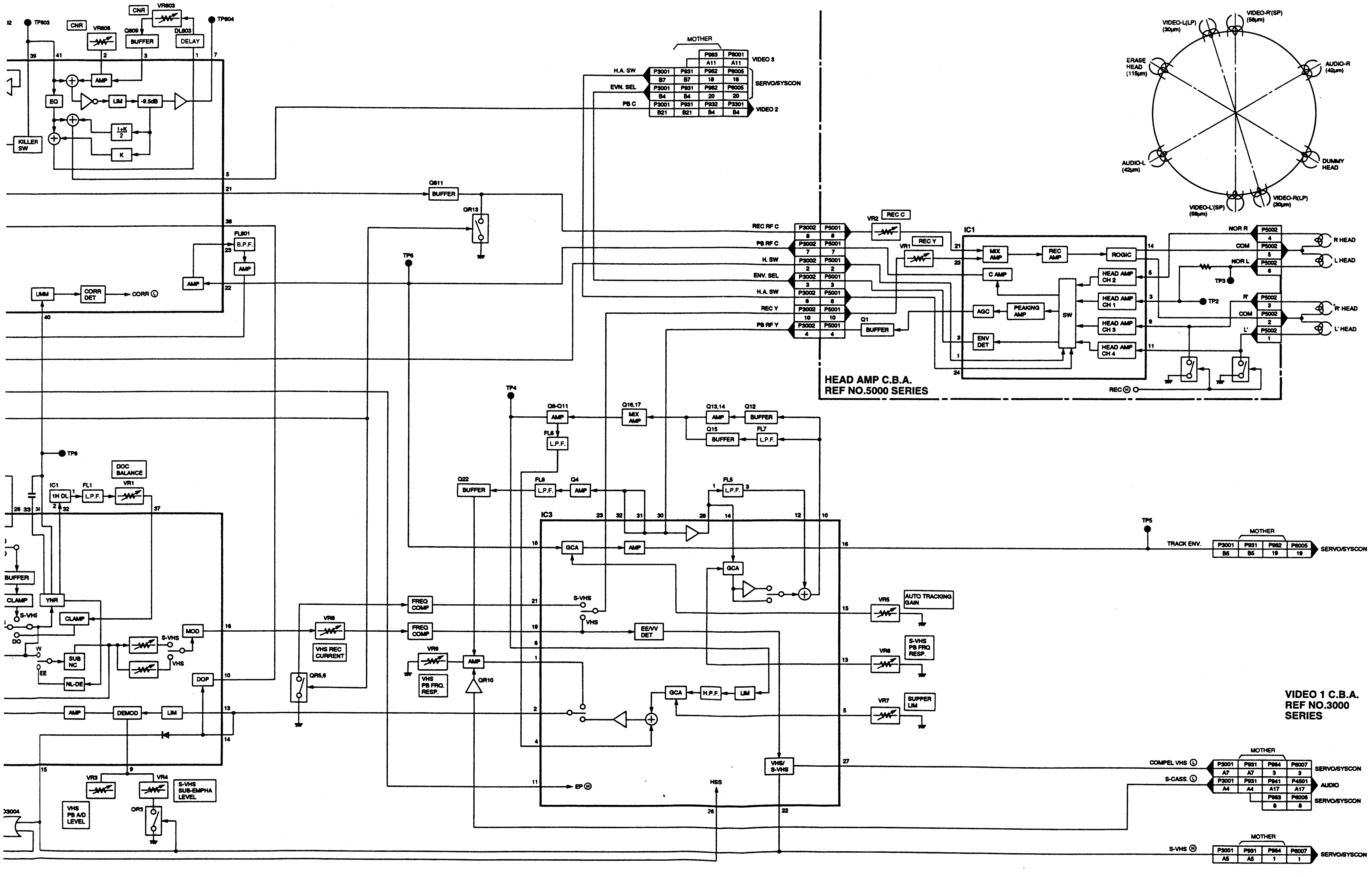
(1=ON
0=OFF)

※{11 POSITION is 3°
12 POSITION is 6°

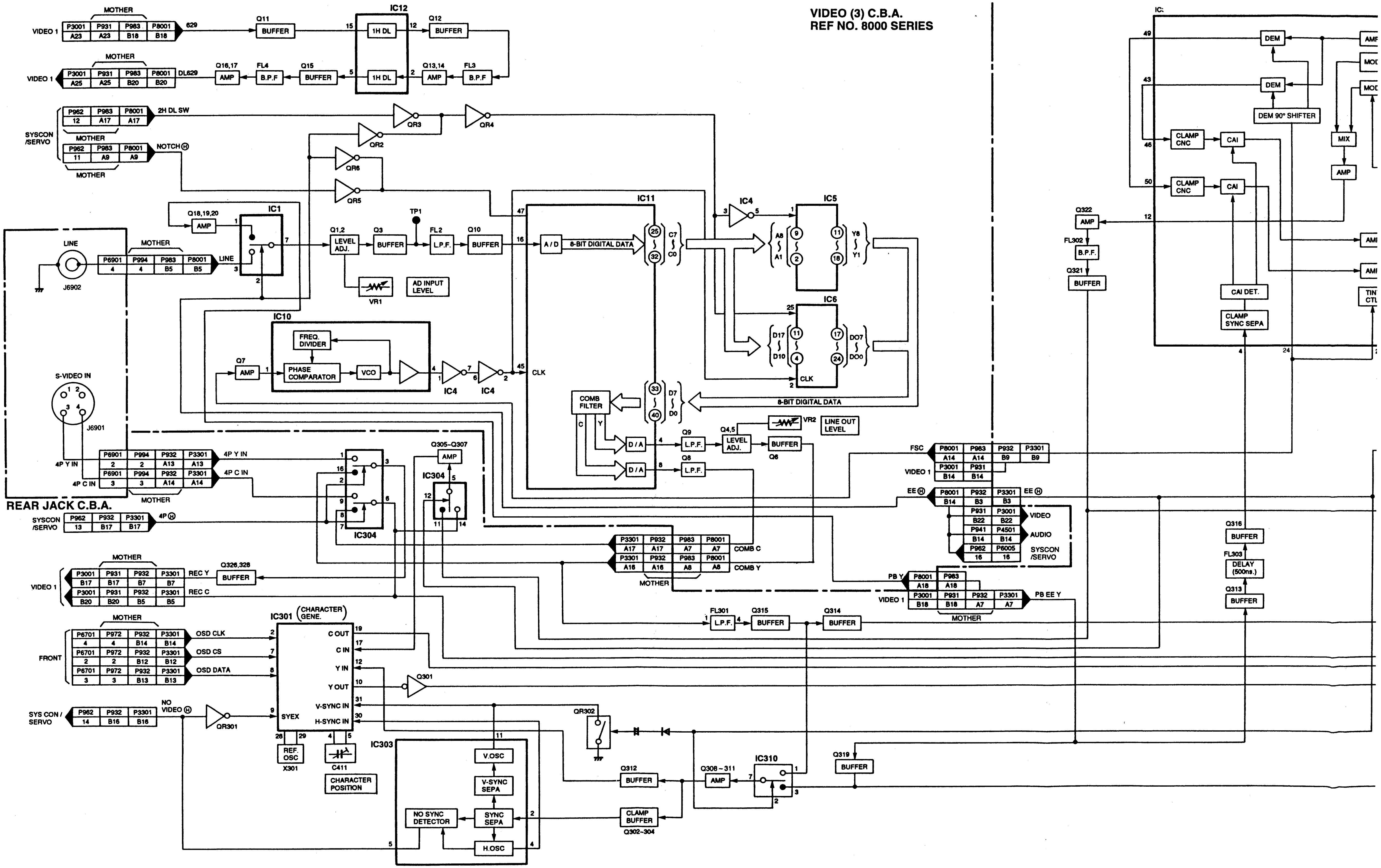

DP6701
DISPLAY
17 ~ 27
5 ~ 15
IC6701
P120
P121
P122
P123
SCAN PULS / SEGMENT
P120
P142
X6701
OSC
X2
X1
GRID
P73
P72
P71
P70
P63
P62
P61
P60
KEY DATA
P60
P73
VDD
VDD
VDD
VDD
AVDD
RESET
IC6702
RESET
P03
P01
P02/SO0/SB0
LED SCN
Q6703
P40
LED SCN
Q6704
P41
LED SCN
Q6705
P42
LED SCN
Q6706
P43
LED OUT
LED OUT
LED OUT
LED OUT
P103
P100
P101
P102
P33/MD3
P32/MD2
P31/MD1
P30/MD0
P12/INT2
+5V
IC6704
P11
P10
P80
P52
P53
P81/SCK1
P82/S01
P83/S11
P50
P51
AN0
AN1
D6739
D6740
OSD CS
OSD ON L
MOTHOR C.B.A.
P6701 | P972 | P932
20 | 2 | B12
P6701 | P972 | P932
21 | 1 | A8
TO VIDEO 1
IC6705
MEMORY
CS
DAT
CLK
ROM CS
IC6706
SCK1
S01
S11
DECODER
SEL ROM
SEL 10
OSD CLK
OSD DATA
MOTHOR C.B.A.
P6701 | P972 | P932
18 | 4 | B14
P6701 | P972 | P932
19 | 3 | B13
TO VIDEO 1
CH1 METER
CH2 METER
MOTHOR C.B.A.
P6701 | P972 | P941
11 | 11 | A3
P6701 | P972 | P941
13 | 9 | A5
FROM AUDIO 1
CH1
VR6701
HI-FI VR REF
HI-FI CH1
VR6702
HI-FI VR REF
HI-FI CH2
CH2
MOTHOR C.B.A.
P6701 | P972 | P941
15 | 7 | B3
P6701 | P972 | P941
12 | 10 | B1
P6701 | P972 | P941
14 | 8 | B2
TO AUDIO 1
VR6703
CH1 PHONE
CH2 PHONE
MOTHER
P6702 | P971 | P941
7 | 7 | A1
P6702 | P971 | P941
6 | 6 | A2
FROM AUDIO 1
HEAD PHON
SW
12V
Q6711
MIC
MIC IN H
FL6701
FILTER
IC6707
ANP
MIC IN
MOTHOR C.B.A.
P6702 | P971 | P941
2 | 2 | B15
P6702 | P971 | P941
4 | 4 | B17
TO AUDIO 1

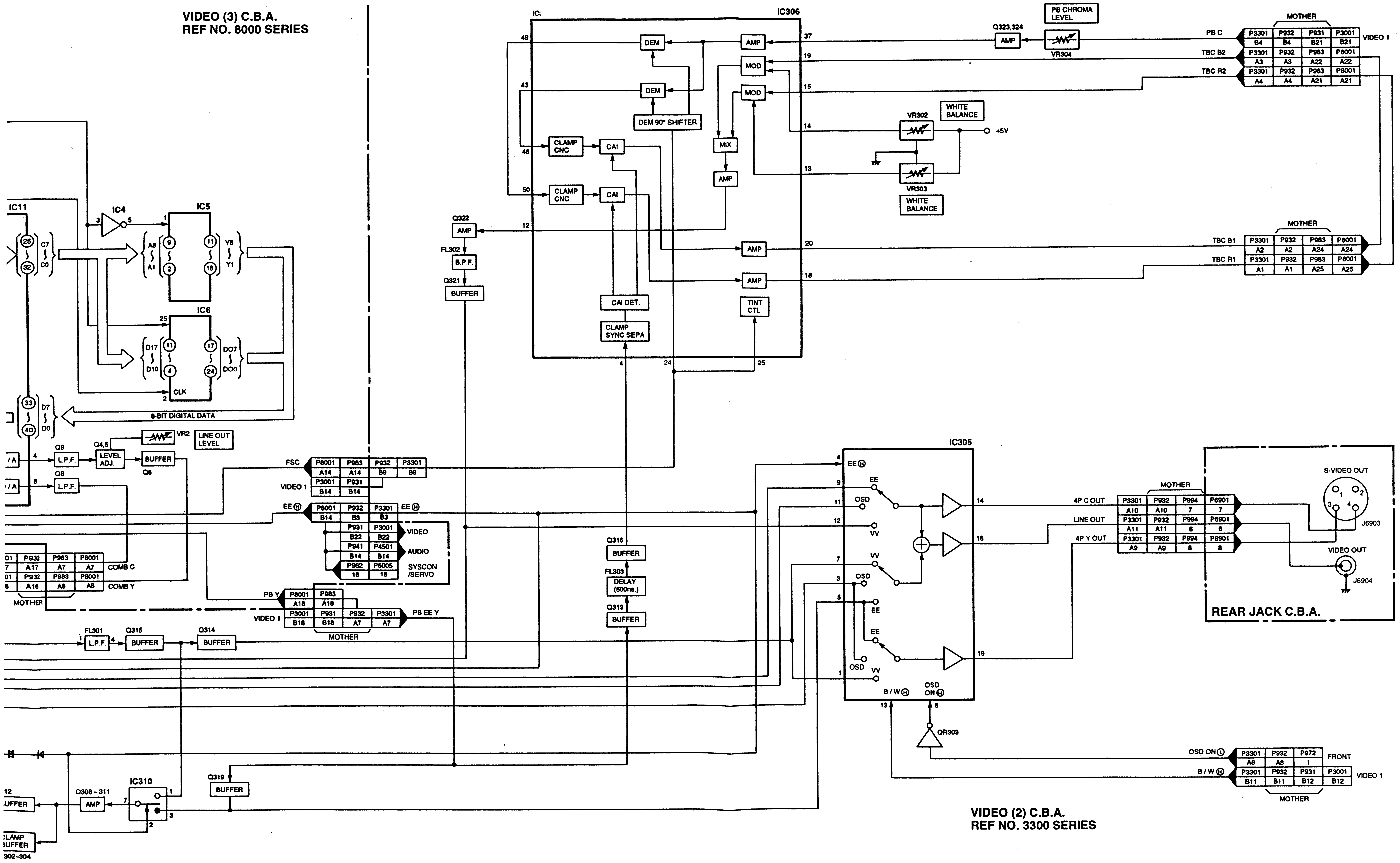
VIDEO 1 BLOCK DIAGRAM


IC801
IC803
IC2
IC3
IC1
MOTHER
VIDEO 2
VIDEO 3
SERVO/SYSCON
REC C
DL629
629
2H DL
ROTARY SW
TRICK Ⓛ
H. SW
EP Ⓛ
QR7
REC Y
D. REC Ⓛ
PB/EE Y
ART V
HSS
EDIT Ⓗ
H.A. SW
EVN. SEL
PB C
3.58MHz B.P.F.
Q803-Q806
FILTER AMP
ACC
MAIN BM
ROTARY
EE/V/TR
AFC DET
4.2MHz VCO
320fH VCO
1/320
1/8
FOR EE
EDIT DET
EDIT
MM
ART BURST GEN
BURST DOWN
BURST
BURST UP
CHROMA ACC AMP
L.P.F.
DL
KILLER SW
FL802
B.P.F.
DL801
DELAY
VR801
C COMB
Q807
BUFFER
DL802
VR802
Q808
TP802
TP803
TP804
CNR
VR806
Q809
VR803
DL803
AMP
EQ
LIM
-9.5dB
1+K 2
K
V-LOGICAL
LIMM
CORR DET
CORR Ⓛ
FL801
Q811
QR13
TP6
TP8
TP4
S-VHS PB Y LEVEL
DOC BALANCE
FL3
FL2
FL1
VR1
VR2
Q1
1H DL
AGC
AGC DET
EE
VV
VHS
S-VHS
NL-DE
SUB EMPHASIS
ARTIFICIAL V/H
CLAMP
YNR
DO
SUB NC
MOD
DOP
NC
DEMOD
SYNC SEPA
Q5
Q6
D3004
VR3
VR4
QR3
VHS PB A/D LEVEL
S-VHS SUB-EMPHA LEVEL
VR8
VHS REC CURRENT
QR5,6
FREQ COMP
VR9
VHS PB FRQ. RESP.
QR10
Q22
FL8
Q4
FL6
Q8-Q11
Q16,17
MIX AMP
Q13,14
Q15
FL5
GCA
EE/VV DET
EP Ⓗ
HSS
2dB
P3301 P932 P931 P3301
P8001 P983 P931 P3001
P6007 P964 P931 P3001
P6005 P962 P931 P3001


TP803
CNR
VR806
CNR
VR803
Q809
BUFFER
DL803
DELAY
TP804
AMP
LIM
-9.5dB
EQ
1+K
2
K
KILLER SW
MOTHER
H.A. SW
EVN. SEL
PB C
P3001
P931
P962
P6005
P983
P6001
P932
P3301
VIDEO 3
SERVO/SYSCON
VIDEO 2
Q811
BUFFER
QR13
FL801
B.P.F.
AMP
TP6
LIMM
CORR DET
CORR Ⓛ
REC RF C
PB RF C
H. SW
ENV. SEL
H.A. SW
REC Y
PB RF Y
P3002
P5001
VR2
REC C
VR1
REC Y
Q1
BUFFER
IC1
MIX AMP
REC AMP
ROGIC
C AMP
HEAD AMP CH 2
HEAD AMP CH 1
HEAD AMP CH 3
HEAD AMP CH 4
AGC
PEAKING AMP
SW
ENV DET
HEAD AMP C.B.A.
REF NO.5000 SERIES
REC Ⓗ
NOR R
COM
NOR L
P5002
TP3
TP2
R'
COM
L'
R HEAD
L HEAD
'R HEAD
L' HEAD
VIDEO-L(LP) (30µm)
VIDEO-R(SP) (58µm)
ERASE HEAD (115µm)
AUDIO-R (42µm)
AUDIO-L (42µm)
DUMMY HEAD
VIDEO-L'(SP) (58µm)
VIDEO-R(LP) (30µm)
TP4
Q8-Q11
AMP
Q16,17
MIX AMP
Q13,14
AMP
Q12
BUFFER
Q15
BUFFER
FL7
L.P.F.
FL6
L.P.F.
TP8
DOC BALANCE
IC1
1H DL
FL1
L.P.F.
VR1
Q22
BUFFER
FL8
L.P.F.
Q4
AMP
FL5
L.P.F.
IC3
GCA
AMP
GCA
TP5
TRACK ENV.
MOTHER
P3001
P931
P962
P6005
SERVO/SYSCON
BUFFER
CLAMP
YNR
S-VHS
DO
CLAMP
MOD
S-VHS
VHS
SUB NC
EE
NL-DE
W
DOP
VR8
VHS REC CURRENT
FREQ COMP
FREQ COMP
S-VHS
VHS
EE/VV DET
VR5
AUTO TRACKING GAIN
VR6
S-VHS PB FRQ RESP.
VR9
VHS PB FRQ. RESP.
AMP
QR10
QR5,6
GCA
H.P.F.
LIM
VR7
SUPPER LIM
AMP
DEMOD
LIM
VIDEO 1 C.B.A.
REF NO.3000
SERIES
VHS/S-VHS
EP Ⓗ
HSS
COMPEL VHS Ⓛ
S-CASS. Ⓛ
P984
P6007
P941
P4501
P963
P6006
AUDIO
VR3
VR4
S-VHS SUB-EMPHA LEVEL
VHS PB A/D LEVEL
QR3
S-VHS Ⓗ
P3001
P931
P984
P6007

VIDEO 2, 3 BLOCK DIAGRAM


VIDEO (3) C.B.A.
REF NO. 8000 SERIES
REAR JACK C.B.A.
MOTHER
VIDEO 1
P3001 P931 P983 P8001
A23 A23 B18 B18
629
A25 A25 B20 B20
DL629
Q11 BUFFER
IC12
1H DL
Q12 BUFFER
Q16,17 AMP
FL4 B.P.F
Q15 BUFFER
Q13,14 AMP
FL3 B.P.F
SYSCON /SERVO
P962 P983 P8001
12 A17 A17
2H DL SW
11 A9 A9
NOTCH Ⓗ
QR3
QR4
QR2
QR6
QR5
Q18,19,20 AMP
IC1
LINE
J6902
P6901 P994 P983 P8001
4 4 B5 B5
Q1,2 LEVEL ADJ.
Q3 BUFFER
TP1
FL2 L.P.F.
Q10 BUFFER
VR1
AD INPUT LEVEL
IC11
A/D
8-BIT DIGITAL DATA
C7 C0
CLK
IC10
FREQ. DIVIDER
PHASE COMPARATOR
VCO
Q7 AMP
IC4
IC5
A8 A1 Y8 Y1
IC6
D17 D10 DO7 DO0
CLK
8-BIT DIGITAL DATA
COMB FILTER
C Y
D7 D0
D/A
Q9 L.P.F.
Q8 L.P.F.
Q4,5 LEVEL ADJ.
VR2
LINE OUT LEVEL
BUFFER Q6
S-VIDEO IN
J6901
4P Y IN
4P C IN
P6901 P994 P932 P3301
2 2 A13 A13
3 3 A14 A14
Q305~Q307 AMP
IC304
SYSCON /SERVO
P962 P932 P3301
13 B17 B17
4P Ⓗ
P3301 P932 P983 P8001
A17 A17 A7 A7
COMB C
A16 A16 A8 A8
COMB Y
P3001 P931 P932 P3301
B17 B17 B7 B7
REC Y
B20 B20 B5 B5
REC C
Q326,328 BUFFER
FRONT
P6701 P972 P932 P3301
4 4 B14 B14
OSD CLK
2 2 B12 B12
OSD CS
3 3 B13 B13
OSD DATA
IC301 (CHARACTER GENE.)
C OUT
C IN
Y IN
Y OUT
V-SYNC IN
H-SYNC IN
SYEX
Q301
SYS CON / SERVO
P962 P932 P3301
14 B16 B16
NO VIDEO Ⓗ
QR301
REF. OSC
X301
C411
CHARACTER POSITION
IC303
V.OSC
V-SYNC SEPA
NO SYNC DETECTOR
SYNC SEPA
H.OSC
QR302
Q312 BUFFER
CLAMP BUFFER
Q302~304
Q308~311 AMP
IC310
Q319 BUFFER
FL301 L.P.F.
Q315 BUFFER
Q314 BUFFER
FSC
P8001 P983 P932 P3301
A14 A14 B9 B9
P3001 P931
B14 B14
EE Ⓗ
P8001 P932 P3301
B14 B3 B3
P931 P3001
B22 B22
VIDEO
P941 P4501
B14 B14
AUDIO
P962 P6005
16 16
SYSCON /SERVO
PB Y
P8001 P983
A18 A18
P3001 P931 P932 P3301
B18 B18 A7 A7
PB EE Y
Q322 AMP
FL302 B.P.F.
Q321 BUFFER
IC:
DEM
DEM 90° SHIFTER
CLAMP CNC
CAI
MIX
AMP
CAI DET.
CLAMP SYNC SEPA
Q316 BUFFER
FL303 DELAY (500ns.)
Q313 BUFFER

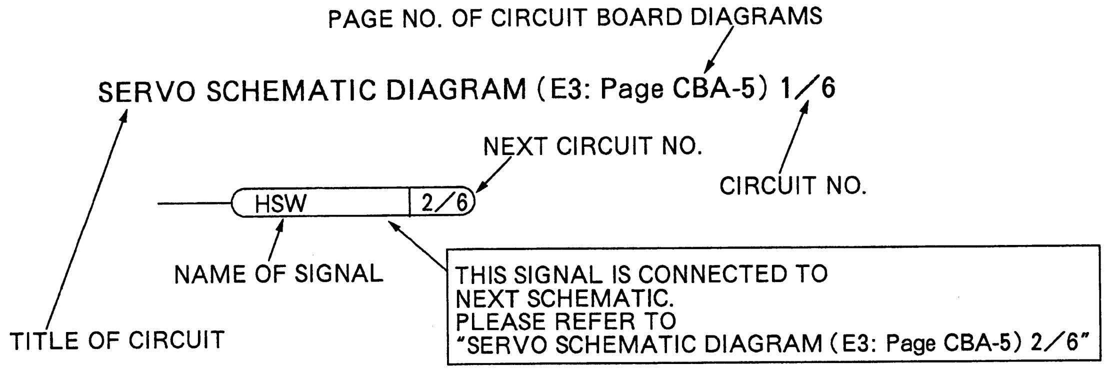

VIDEO (3) C.B.A.
REF NO. 8000 SERIES
VIDEO (2) C.B.A.
REF NO. 3300 SERIES
REAR JACK C.B.A.
IC306
IC305
IC11
IC4
IC5
IC6
IC310
DEM
DEM 90° SHIFTER
AMP
MOD
MIX
CLAMP CNC
CAI
CAI DET.
CLAMP SYNC SEPA
TINT CTL
PB CHROMA LEVEL
VR304
Q323,324
WHITE BALANCE
VR302
VR303
+5V
Q322
FL302
B.P.F.
Q321
BUFFER
8-BIT DIGITAL DATA
LINE OUT LEVEL
VR2
Q4,5
LEVEL ADJ.
Q9
Q8
Q6
L.P.F.
FL301
Q315
Q314
Q316
FL303
DELAY (500ns.)
Q313
Q319
Q306 – 311
CLK
COMB C
COMB Y
MOTHER
FSC
VIDEO 1
EE Ⓗ
VIDEO
AUDIO
SYSCON /SERVO
PB Y
PB EE Y
PB C
TBC B2
TBC R2
TBC B1
TBC R1
4P C OUT
LINE OUT
4P Y OUT
S-VIDEO OUT
J6903
VIDEO OUT
J6904
EE
OSD
VV
B / W Ⓗ
OSD ON Ⓗ
QR303
OSD ON Ⓛ
B / W Ⓗ
FRONT
CLAMP BUFFER
P8001
P983
P932
P3301
P3001
P931
P941
P4501
P962
P6005
P994
P6901
P972

SECTION 6

SCHEMATIC DIAGRAMS

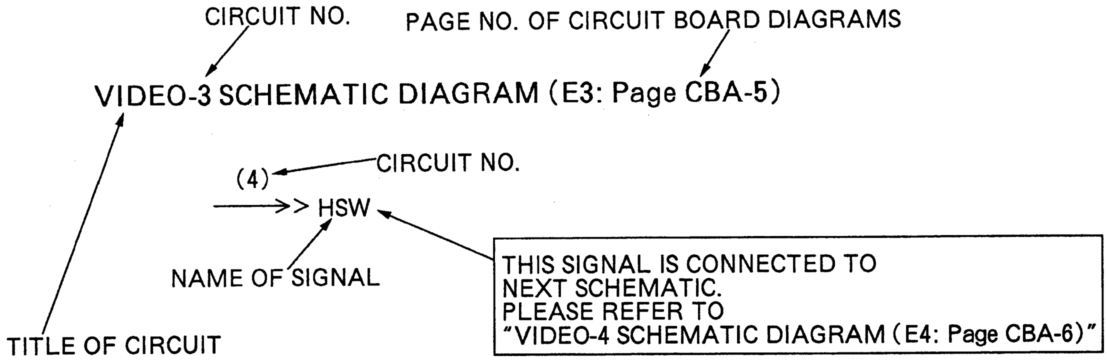
NOTE

(EX1)


PAGE NO. OF CIRCUIT BOARD DIAGRAMS
SERVO SCHEMATIC DIAGRAM (E3: Page CBA-5) 1／6
NEXT CIRCUIT NO.
CIRCUIT NO.
HSW
2／6
NAME OF SIGNAL
TITLE OF CIRCUIT

THIS SIGNAL IS CONNECTED TO
NEXT SCHEMATIC.
PLEASE REFER TO
"SERVO SCHEMATIC DIAGRAM (E3: Page CBA-5) 2／6"

(EX2)


CIRCUIT NO.
PAGE NO. OF CIRCUIT BOARD DIAGRAMS
VIDEO-3 SCHEMATIC DIAGRAM (E3: Page CBA-5)
(4)
CIRCUIT NO.
>> HSW
NAME OF SIGNAL
TITLE OF CIRCUIT

THIS SIGNAL IS CONNECTED TO
NEXT SCHEMATIC.
PLEASE REFER TO
"VIDEO-4 SCHEMATIC DIAGRAM (E4: Page CBA-6)"

CONTENTS

POWER SUPPLY (1~3) SCHEMATIC DIAGRAM SCM-3
SYSTEM CONTROL SCHEMATIC DIAGRAM (1/6) SCM-4
SERVO SCHEMATIC DIAGRAM (3/0) SCM-5
MOTOR DRIVE SCHEMATIC DIAGRAM (4/6) SCM-6
REEL SERVO SCHEMATIC DIAGRAM (2/6) SCM-7
DC-DC CONVERTOR SCHEMATIC DIAGRAM (5/6) SCM-8
CONNECTION SCHEMATIC DIAGRAM (6/6) SCM-9
REEL DRIVE SCHEMATIC DIAGRAM SCM-10
FRONT (1) SCHEMATIC DIAGRAM (1/4) SCM-11
FRONT (2) SCHEMATIC DIAGRAM (2/4) SCM-12
FRONT (3) SCHEMATIC DIAGRAM (3/4) SCM-12
FRONT (4) SCHEMATIC DIAGRAM (4/4) SCM-13
VIDEO (1) SCHEMATIC DIAGRAM (1/2) SCM-14
VIDEO (1) SCHEMATIC DIAGRAM (2/2) SCM-16
VIDEO (2) SCHEMATIC DIAGRAM SCM-19
VIDEO (3) SCHEMATIC DIAGRAM (1/2) SCM-20
VIDEO (3) SCHEMATIC DIAGRAM (2/2) SCM-21
AUDIO 1 SCHEMATIC DIAGRAM SCM-22
FM AUDIO PACK SCHEMATIC DIAGRAM (IC4505) SCM-23
AUDIO 2 SCHEMATIC DIAGRAM SCM-24
HEAD AMP SCHEMATIC DIAGRAM SCM-25
REAR JACK SCHEMATIC DIAGRAM SCM-26
MOTHER SCHEMATIC DIAGRAM SCM-27
INTERCONNECTION SCHEMATIC DIAGRAM SCM-28

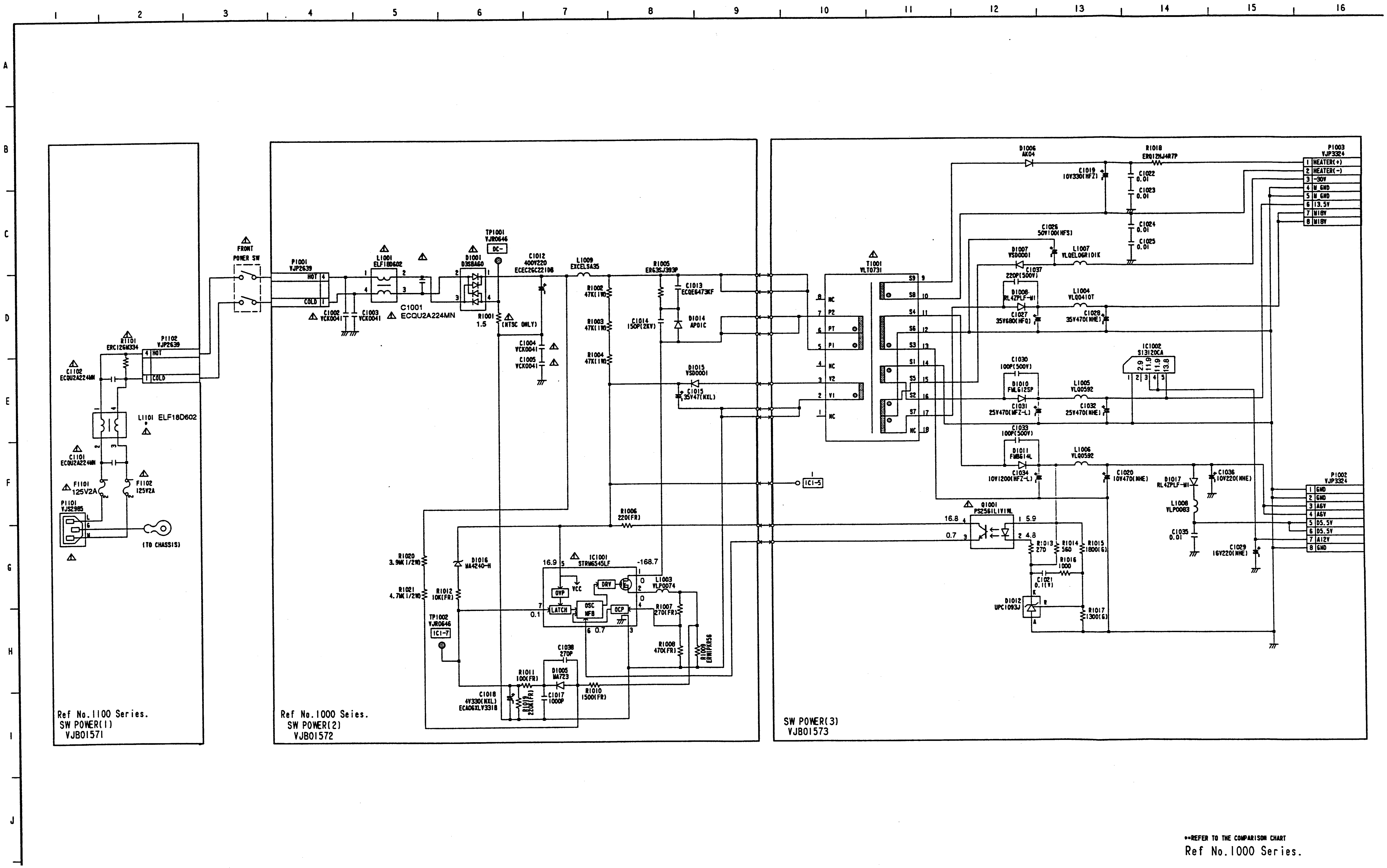
IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE

DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

POWER SUPPLY (1~3) SCHEMATIC DIAGRAM (E1,E2,E3: Page CBA-3)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A
B
C
D
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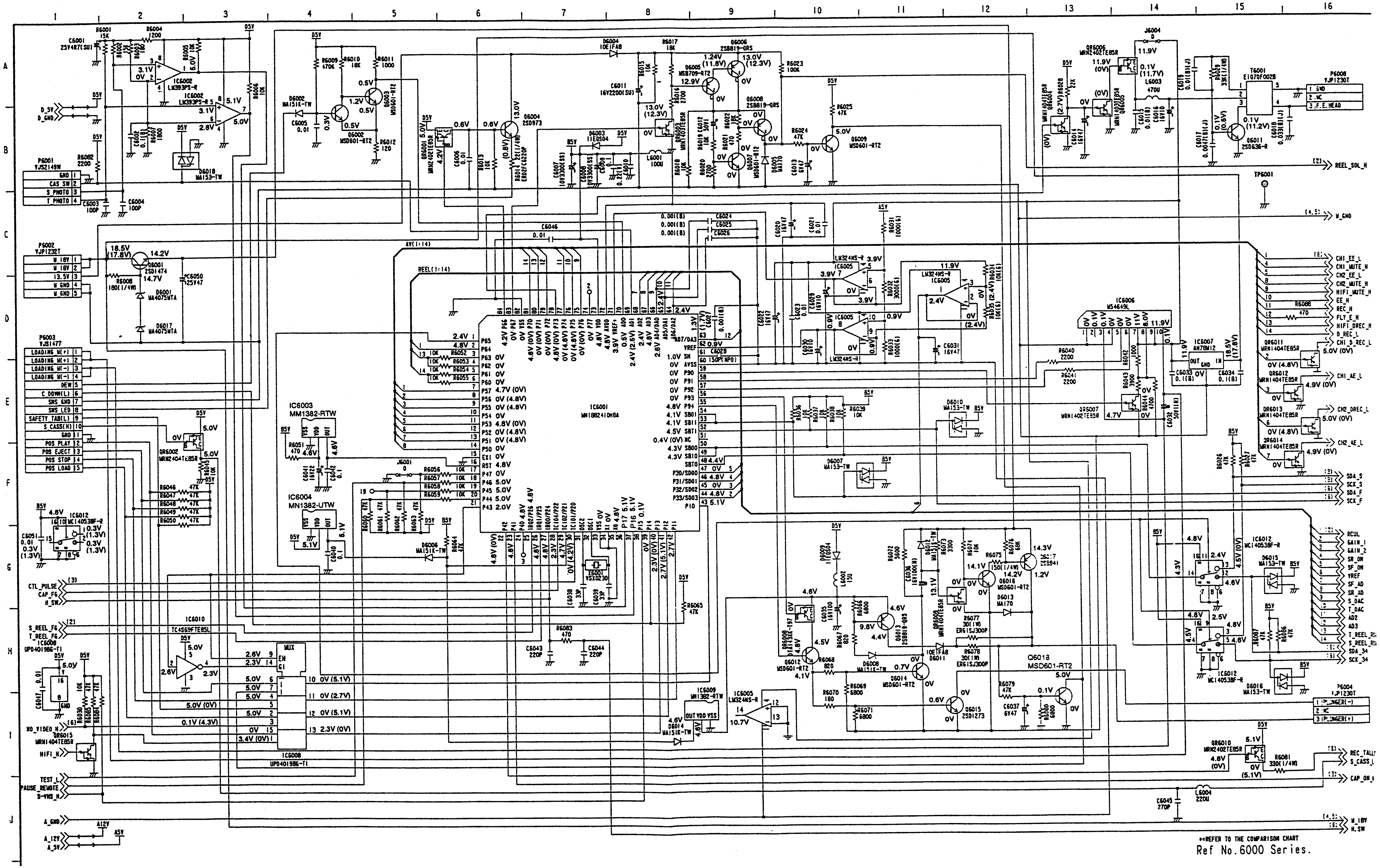
F
G
H
I
J
FRONT POWER SW
P1001 VJP2639
HOT
COLD
L1001 ELF18D602
C1001 ECQU2A224MN
C1002 VCK0041
C1003 VCK0041
D1001 D3SBA60
TP1001 VJR0646
DC-
R1001 1.5
(NTSC ONLY)
C1012 400V220 ECEC2GC221DB
C1004 VCK0041
C1005 VCK0041
L1009 EXCELSA35
R1002 47K(1W)
R1003 47K(1W)
R1004 47K(1W)
R1005 ERG3SJ393P
C1013 ECQE6473KF
C1014 150P(2KV)
D1014 APO1C
D1015 VSD0001
C1015 35V47(NXL)
R1006 220(FR)
R1020 3.9M(1/2W)
R1021 4.7M(1/2W)
D1016 MA4240-H
R1012 10K(FR)
TP1002 VJR0646
IC1-7
IC1001 STRM6545LF
16.9
-168.7
OVP
VCC
DRV
LATCH
OSC NFB
OCP
0.1
6 0.7
L1003 VLP0074
R1007 270(FR)
R1008 470(FR)
R1009 ERW1PKR56
C1038 270P
R1011 100(FR)
D1005 MA723
R1010 1500(FR)
C1017 1000P
R1019 220K(FR)
C1018 4V330(NXL) ECA0GXLV331B
P1102 VJP2639
R1101 ERC12GM334
C1102 ECQU2A224MN
L1101 ELF18D602
C1101 ECQU2A224MN
F1101 125V2A
F1102 125V2A
P1101 VJS2985
(TO CHASSIS)
Ref No.1100 Series.
SW POWER(1)
VJB01571
Ref No.1000 Seies.
SW POWER(2)
VJB01572
T1001 VLT0731
NC
P2
PT
P1
V2
V1
S9
S8
S4
S6
S3
S1
S5
S2
S7
IC1-5
D1006 AK04
R1018 ERQ12HJ4R7P
C1019 10V330(HFZ)
C1022 0.01
C1023 0.01
C1024 0.01
C1025 0.01
C1026 50V100(HFS)
D1007 VSD0001
L1007 VLQEL0GR101K
C1037 220P(500V)
D1008 RL4ZPLF-M1
C1027 35V680(HFQ)
L1004 VLQ0410T
C1028 35V470(NHE)
IC1002 SI3120CA
2.9
11.9
11.9
13.8
C1030 100P(500V)
D1010 FML612SP
C1031 25V470(MFZ-L)
L1005 VLQ0592
C1032 25V470(NHE)
C1033 100P(500V)
D1011 FMB614L
C1034 10V1200(HFZ-L)
L1006 VLQ0592
C1020 10V470(NHE)
D1017 RL4ZPLF-M1
C1036 10V220(NHE)
L1008 VLP0083
C1035 0.01
C1029 16V220(NHE)
Q1001 PS2561L1V1NL
16.8
0.7
5.9
4.8
R1013 270
R1014 560
R1015 1800(G)
R1016 1000
C1021 0.1(V)
D1012 UPC1093J
R1017 1300(G)
P1003 VJP3324
HEATER(+)
HEATER(-)
-30V
M GND
M GND
13.5V
M18V
M18V
P1002 VJP3324
GND
GND
A6V
A6V
D5.5V
D5.5V
A12V
GND
SW POWER(3)
VJB01573

**REFER TO THE COMPARISON CHART
Ref No.1000 Series.

SYSTEM CONTROL SCHEMATIC DIAGRAM (E4: Page CBA-5) 1/6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D
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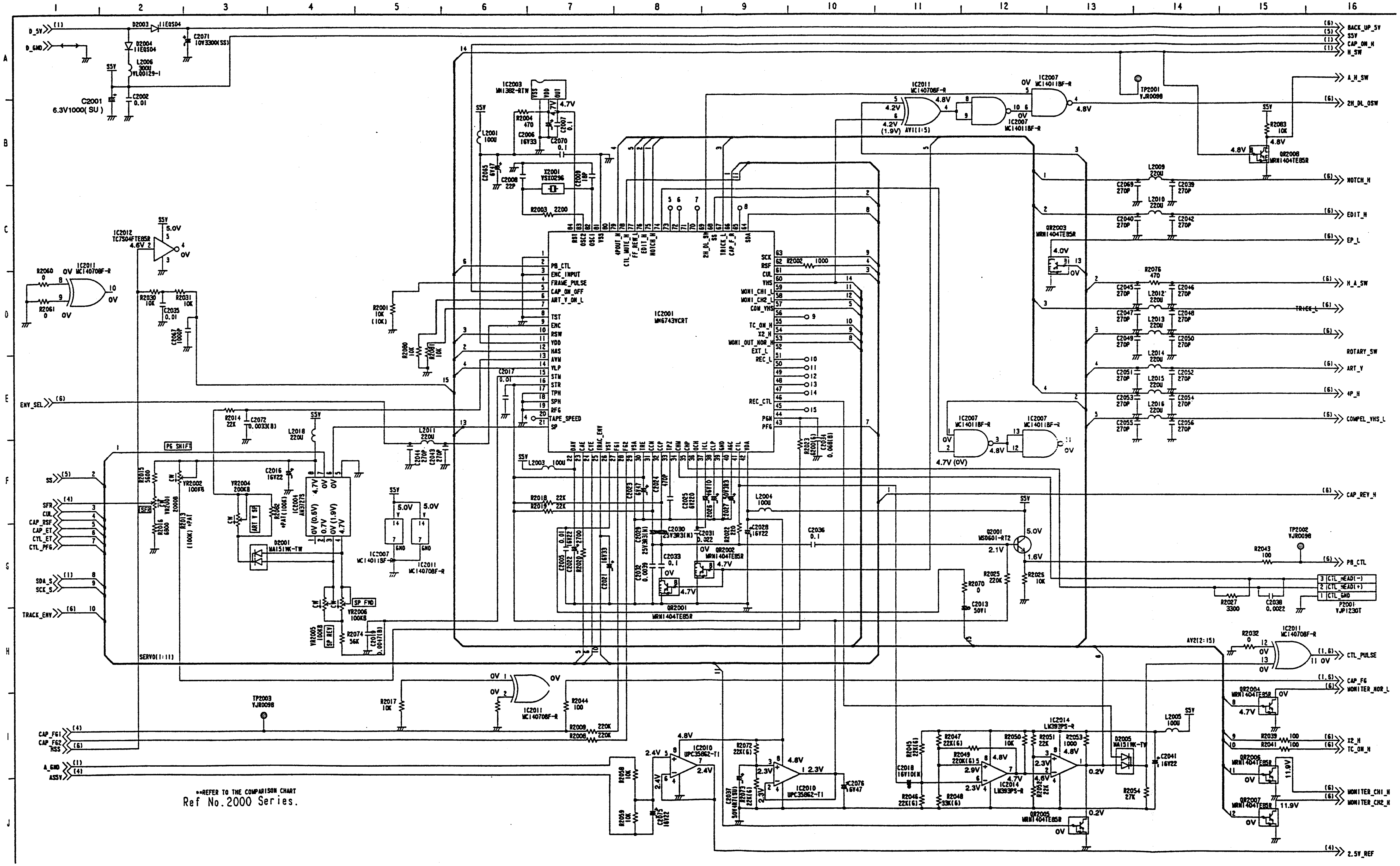
H
I
J
P6001 YJS2149W
GND
CAS SW
S PHOTO
T PHOTO
D_5V
D_GND
P6002 YJP1232T
M 18V
M 18V
13.5V
M GND
M GND
P6003 YJS1477
LOADING M(+)
LOADING M(+)
LOADING M(-)
LOADING M(-)
DEW
C DOWN(L)
SNS GND
SNS LED
SAFETY TAB(L)
S CASS(H)
GND
POS PLAY
POS EJECT
POS STOP
POS LOAD
IC6002 LM393PS-R
Q6001 2SD1474
D6001 MA4075MTA
D6017 MA4075MTA
IC6003 MM1382-RTW
IC6004 MN1382-UTW
IC6001 MN188241OH8A
IC6005 LM324NS-R
IC6006 M54649L
IC6007 AN78M12
IC6008 UPD4019B6-T1
IC6009 MN1382-RTW
IC6010 TC4S69FTE85L
IC6012 MC14053BF-R
Q6002 MSD601-RT2
Q6003 MSD601-RT2
Q6004 2SD973
Q6005 MSB709-RT2
Q6006 2SB819-QRS
Q6008 2SB819-QRS
Q6009 MSD601-RT2
Q6011 2SD636-R
Q6012 MSD601-RT2
Q6013 2SB819-QRS
Q6014 MSD601-RT2
Q6015 2SD1273
Q6016 MSD601-RT2
Q6018 MSD601-RT2
X6001 VSX0230
J6001
J6004
L6001
L6002
L6003
L6004
T6001 E1070F002B
P6008 YJP1230T
1 GND
2 NC
3 F.E.HEAD
P6004 YJP1230T
1 PLUNGER(-)
2 NC
3 PLUNGER(+)
TP6001
REEL_SOL_H
M_GND
CH1_EE_L
CH1_MUTE_H
CH2_EE_L
CH2_MUTE_H
HIFI_MUTE_H
EE_H
REC_H
FLY_E_H
HIFI_DREC_H
D_REC_L
CH1_D_REC_L
CH1_AE_L
CH2_DREC_L
CH2_AE_L
SDA_S
SCK_S
SDA_F
SCK_F
RCUL
GAIN_1
GAIN_2
SR_ON
SF_ON
VREF
SF_AD
SR_AD
S_DAC
T_DAC
AD2
AD3
T_REEL_RS
S_REEL_RS
SDA_34
SCK_34
REC_TALLY
S_CASS_L
CAP_ON_H
M_18V
H.SW
CTL_PULSE
CAP_FG
H_SW
S_REEL_FG
T_REEL_FG
XO_VIDEO_H
HIFI_H
TEST_L
PAUSE_REMOTE
S-VHS_H
A_GND
A_12V
A_5V
AVC(1:14)
REEL(1:14)
MUX

*=REFER TO THE COMPARISON CHART

Ref No.6000 Series.

SERVO SCHEMATIC DIAGRAM (E4: Page CBA-5) 3/6



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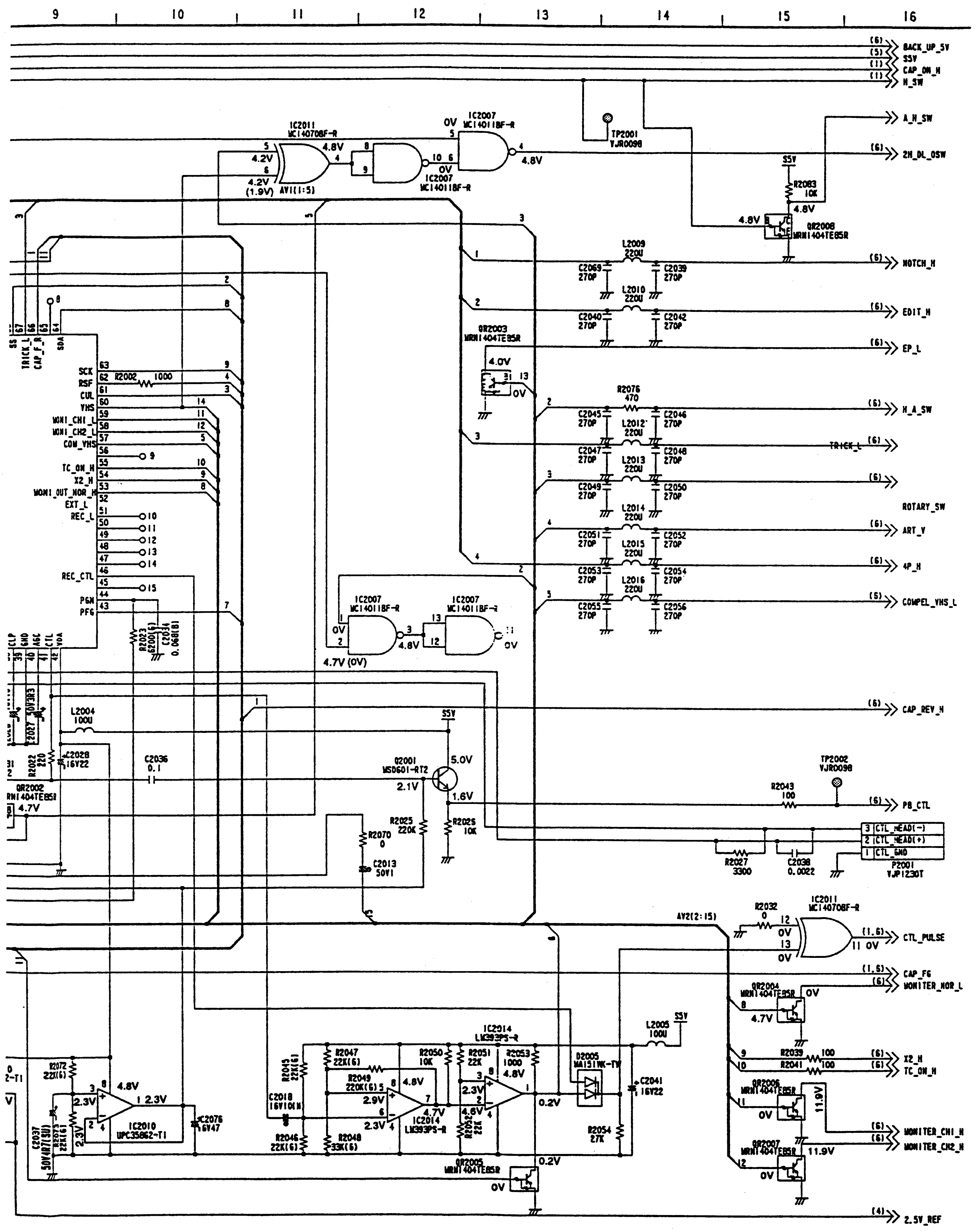
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
D_5V
D_GND
D2003
11EQS04
D2004
11EQS04
L2006
300U
YL00129-1
S5Y
C2001
6.3V1000(SU)
C2002
0.01
C2071
10V3300(SS)
IC2003
MN1382-RTW
IC2001
MN6743VCRT
X2001
VSX0296
IC2012
TC7S04FTE85R
IC2011
MC14070BF-R
IC2007
MC14011BF-R
IC2004
AN3727S
IC2010
UPC358G2-T1
IC2014
LM393PS-R
Q2001
MSD601-RT2
QR2001
MRN1404TE85R
QR2002
MRN1404TE85R
QR2003
MRN1404TE85R
QR2004
MRN1404TE85R
QR2005
MRN1404TE85R
QR2006
MRN1404TE85R
QR2007
MRN1404TE85R
QR2008
MRN1404TE85R
D2001
MA151WK-TW
D2005
MA151WK-TW
TP2001
VJR0098
TP2002
VJR0098
TP2003
VJR0098
VR2002
100KB
VR2004
200KB
VR2005
100KB
VR2006
100KB
PG SHIFT
SFR
ART V SF
SP REV
SP FWD
ENV_SEL
SS
SFR
CUL
CAP_RSF
CAP_ET
CTL_ET
CTL_PFG
SDA_S
SCK_S
TRACK_ENV
CAP_FG1
CAP_FG2
HSS
A_GND
ASSY
SERVO(1:11)
BACK_UP_5V
S5V
CAP_ON_H
H_SW
A_H_SW
2H_DL_OSW
NOTCH_H
EDIT_H
EP_L
H_A_SW
TRICK_L
ROTARY_SW
ART_Y
4P_H
COMPEL_VHS_L
CAP_REV_H
PB_CTL
CTL_HEAD(-)
CTL_HEAD(+)
CTL_GND
P2001
VJP1230T
CTL_PULSE
CAP_FG
MONITER_NOR_L
X2_H
TC_ON_H
MONITER_CH1_H
MONITER_CH2_H
2.5V_REF
PB_CTL
ENC_INPUT
FRAME_PULSE
CAP_ON_OFF
ART_V_ON_L
TST
ENC
RSW
VDD
HAS
AVH
PLP
STH
STR
TPH
SPH
RFG
TAPE_SPEED
SP
SCK
RSF
CUL
VHS
MON1_CH1_L
MON1_CH2_L
COM_VHS
TC_ON_H
X2_H
MON1_OUT_NOR_H
EXT_L
REC_L
REC_CTL
PGH
PFG

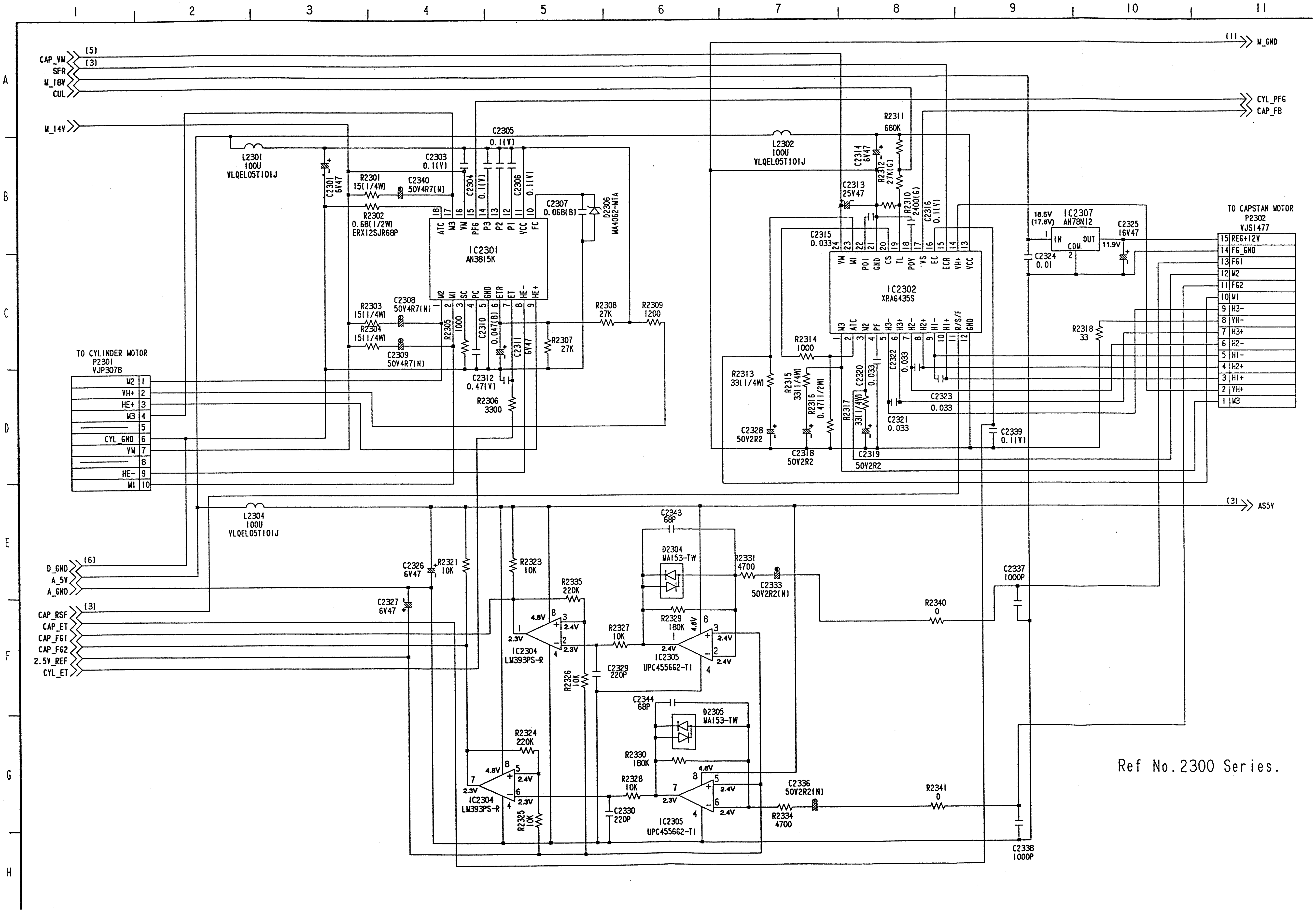
**REFER TO THE COMPARISON CHART
Ref No.2000 Series.

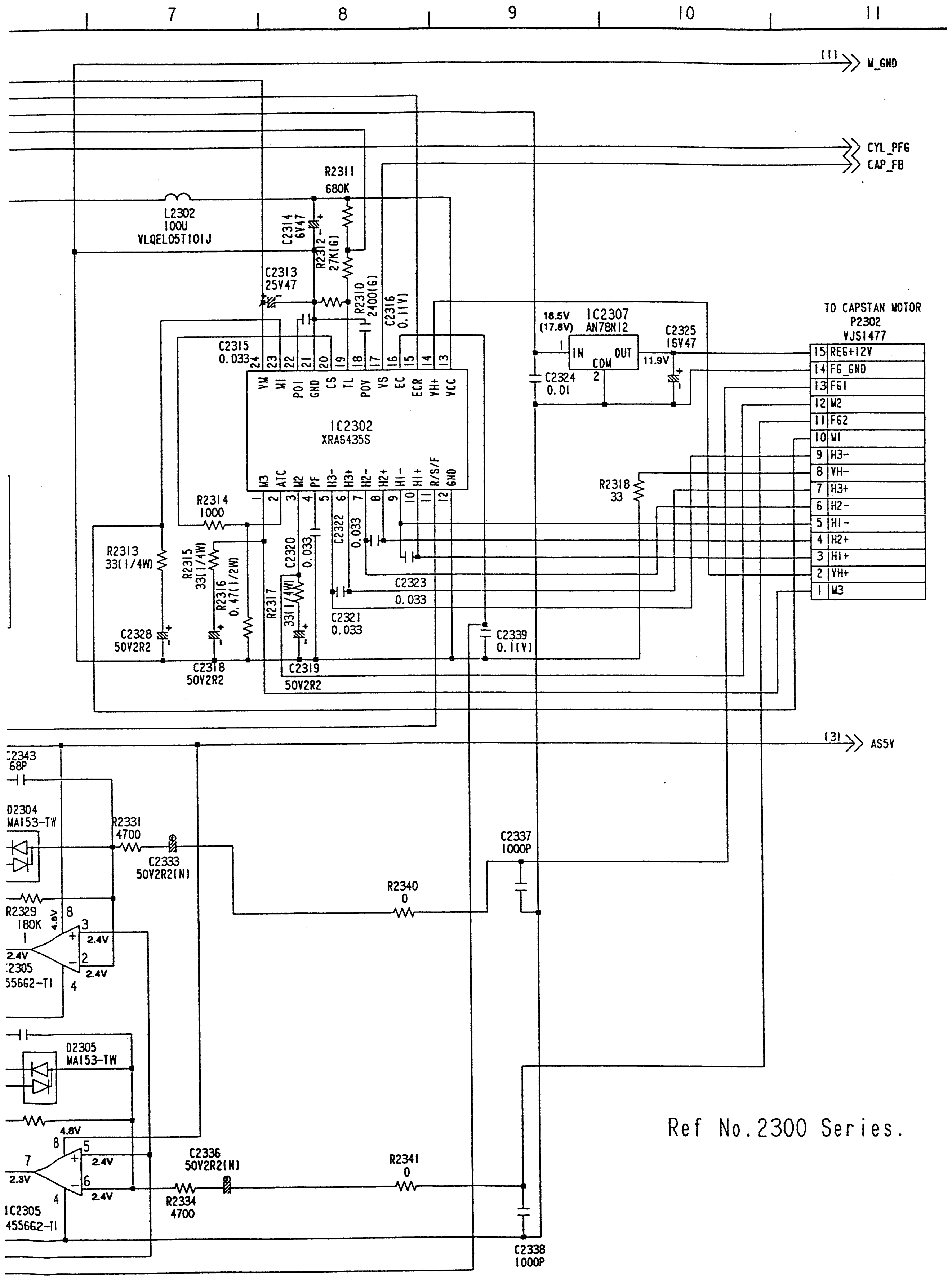

9
10
11
12
13
14
15
16
BACK_UP_5V
S5V
CAP_ON_H
H_SW
A_H_SW
2H_DL_OSW
NOTCH_H
EDIT_H
EP_L
H_A_SW
TRICK_L
ROTARY_SW
ART_V
4P_H
COMPEL_VHS_L
CAP_REV_H
PB_CTL
CTL_HEAD(-)
CTL_HEAD(+)
CTL_GND
P2001
VJP1230T
CTL_PULSE
CAP_FG
MONITER_HOR_L
X2_H
TC_ON_H
MONITER_CH1_H
MONITER_CH2_H
2.5V_REF
IC2011
MC14070BF-R
IC2007
MC14011BF-R
TP2001
VJR0098
TP2002
VJR0098
QR2008
MRN1404TE85R
QR2003
MRN1404TE85R
Q2001
MSD601-RT2
IC2010
UPC3586Z-T1
IC2014
LM393PS-R
D2005
MA151WK-TW
QR2004
QR2006
QR2007
QR2005
L2004
L2005
L2009
L2010
L2012
L2013
L2014
L2015
L2016
R2002
R2025
R2027
R2032
R2039
R2041
R2043
R2047
R2049
R2050
R2051
R2053
R2054
R2076
R2083
C2036
C2038
C2041
C2076

IC2001

PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC	PIN NO.	PLAY	REC
1	0V	0V	13	0V	0V	25	2.0V	0V	37	2.3V	2.3V	49	0V	0V	61	4.7V	4.7V	73	0V	0V
2	0.2V	0.2V	14	0V	0V	26	2.3V	2.3V	38	2.3V	2.3V	50	0V	0V	62	0V	0V	74	4.7V	0V
3	0V	0V	15	0V	0V	27	2.2V	2.2V	39	0V	0V	51	0V	0V	63	4.7V	4.7V	75	0V	0V
4	0V	0V	16	2.3V	2.3V	28	2.3V	2.3V	40	2.8V	2.3V	52	0V	0V	64	4.5V	4.5V	76	0V	0V
5	4.8V	4.8V	17	0V	0V	29	0V	0V	41	2.3V	2.3V	53	0V	4.7V	65	4.7V	4.7V	77	4.7V	4.7V
6	0V	0V	18	0V	0V	30	2.3V	2.3V	42	4.8V	4.8V	54	0V	0V	66	0V	0V	78	0V	0V
7	0V	0V	19	0V	0V	31	2.5V	2.5V	43	0.8V	0.8V	55	0V	0V	67	4.7V	4.7V	79	0V	0V
8	0V	0V	20	0V	0V	32	2.4V	2.4V	44	2.8V	2.8V	56	0V	0V	68	0V	0V	80	0V	0V
9	4.4V	0V	21	0V	0V	33	4.7V	4.7V	45	0V	0V	57	0V	0V	69	0V	0V	81	0V	0V
10	4.1V	4.8V	22	4.8V	4.8V	34	0V	2.8V	46	0V	4.7V	58	0V	0V	70	0V	0V	82	2.1V	2.1V
11	4.7V	4.7V	23	2.4V	2.4V	35	0V	3.3V	47	0V	0V	59	0V	0V	71	4.7V	4.7V	83	2.1V	2.1V
12	0V	0V	24	2.3V	2.3V	36	0V	0V	48	0V	0V	60	4.7V	4.7V	72	0V	0V	84	4.7V	4.7V

MOTOR DRIVE SCHEMATIC DIAGRAM (E4: Page CBA-5) 4/6


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
CAP_VM
SFR
M_18V
CUL
M_14V
(5)
(3)
(1)
M_GND
CYL_PFG
CAP_FB
L2301
100U
VLQEL05T101J
C2301
6V47
R2301
15(1/4W)
C2340
50V4R7(N)
R2302
0.68(1/2W)
ERX12SJR68P
C2303
0.1(V)
C2304
C2305
0.1(V)
C2306
C2307
0.068(B)
D2306
MA4062-MTA
IC2301
AN3815K
ATC
M3
VM
PF6
P3
P2
P1
VCC
FC
M2
M1
SC
PC
GND
ETR
ET
HE-
HE+
R2303
15(1/4W)
C2308
50V4R7(N)
R2304
15(1/4W)
C2309
50V4R7(N)
R2305
1000
C2310
0.047(B)
C2311
6V47
C2312
0.47(V)
R2306
3300
R2307
27K
R2308
27K
R2309
1200
TO CYLINDER MOTOR
P2301
VJP3078
M2
VH+
HE+
M3
CYL_GND
VM
HE-
M1
L2302
100U
VLQEL05T101J
C2314
6V47
R2311
680K
R2312
27K(G)
C2313
25V47
R2310
2400(G)
C2316
0.1(V)
C2315
0.033
IC2302
XRA6435S
VM
M1
PO1
GND
CS
TL
POY
YS
EC
ECR
VH+
VCC
M3
ATC
M2
PF
H3-
H3+
H2+
H2-
H1-
H1+
R/S/F
GND
R2314
1000
R2313
33(1/4W)
R2315
33(1/4W)
R2316
0.47(1/2W)
C2320
0.033
C2322
0.033
R2317
33(1/4W)
C2323
0.033
C2321
0.033
C2328
50V2R2
C2318
50V2R2
C2319
50V2R2
C2339
0.1(V)
18.5V
(17.8V)
IC2307
AN78N12
IN
OUT
COM
11.9V
C2324
0.01
C2325
16V47
R2318
33
TO CAPSTAN MOTOR
P2302
VJS1477
REG+12V
FG_GND
FG1
M2
FG2
M1
H3-
VH-
H3+
H2-
H1-
H2+
H1+
VH+
M3
L2304
100U
VLQEL05T101J
(3)
A5V
D_GND
A_5V
A_GND
(6)
CAP_RSF
CAP_ET
CAP_FG1
CAP_FG2
2.5V_REF
CYL_ET
C2326
6V47
R2321
10K
C2327
6V47
R2323
10K
R2335
220K
IC2304
LM393PS-R
4.8V
2.4V
2.3V
R2326
10K
C2343
68P
D2304
MA153-TW
R2331
4700
C2333
50V2R2(N)
R2329
180K
R2327
10K
C2329
220P
IC2305
UPC4556G2-T1
C2337
1000P
R2340
0
R2324
220K
R2325
10K
C2344
68P
D2305
MA153-TW
R2330
180K
R2328
10K
C2330
220P
C2336
50V2R2(N)
R2334
4700
R2341
0
C2338
1000P
Ref No.2300 Series.


7
8
9
10
11
(1) M_GND
CYL_PFG
CAP_FB
R2311
680K
L2302
100U
VLQEL05T101J
C2314
6V47
R2312
27K(G)
C2313
25V47
R2310
2400(G)
C2316
0.1(V)
C2315
0.033
IC2302
XRA6435S
VM
MI
PO1
GND
CS
TL
POV
VS
EC
ECR
VH+
VCC
M3
ATC
M2
PF
H3-
H3+
H2-
H2+
H1-
H1+
R/S/F
GND
18.5V
(17.8V)
IC2307
AN78N12
IN
OUT
COM
11.9V
C2324
0.01
C2325
16V47
TO CAPSTAN MOTOR
P2302
VJS1477
REG+12V
FG_GND
FG1
M2
FG2
M1
H3-
VH-
H3+
H2-
H1-
H2+
H1+
VH+
M3
R2318
33
R2314
1000
R2313
33(1/4W)
R2315
33(1/4W)
R2316
0.47(1/2W)
R2317
33(1/4W)
C2320
0.033
C2322
0.033
C2323
0.033
C2321
0.033
C2339
0.1(V)
C2328
50V2R2
C2318
50V2R2
C2319
50V2R2
(3) AS5V
C2343
68P
D2304
MA153-TW
R2331
4700
C2333
50V2R2(N)
R2329
180K
IC2305
455662-T1
4.6V
2.4V
2.3V
4.8V
C2337
1000P
R2340
0
D2305
MA153-TW
C2336
50V2R2(N)
R2334
4700
R2341
0
C2338
1000P

Ref No.2300 Series.

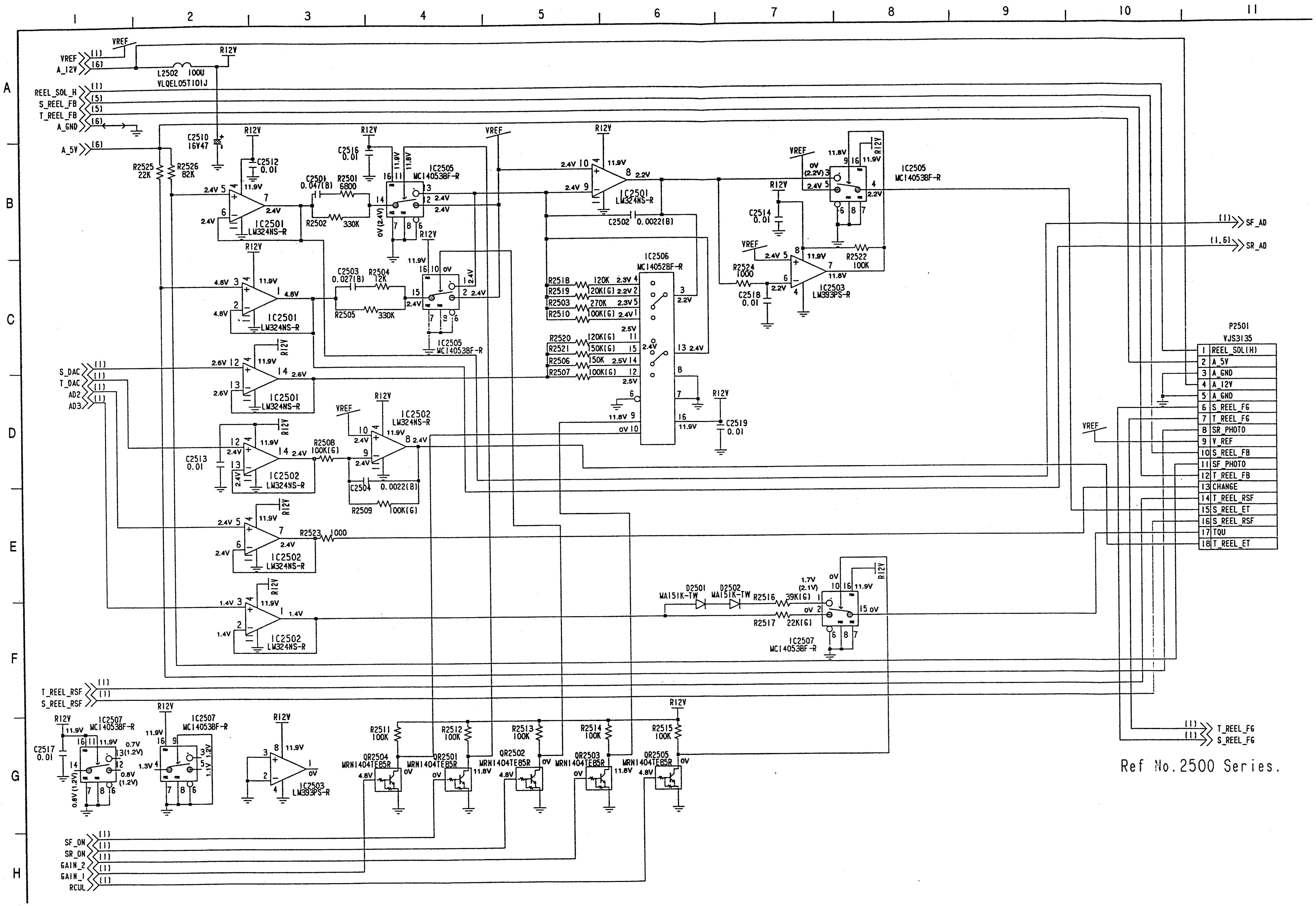
IC2301

PIN No.	PLAY	REC	PIN No.	PLAY	REC
1	12.5V	12.5V	13	3.5V	3.5V
2	12.6V	12.6V	14	3.5V	3.5V
3	0.3V	0.3V	15	1.1V	1.1V
4	1.1V	1.1V	16	12.8V	12.8V
5	0V	0V	17	12.6V	12.6V
6	2.4V	2.4V	18	0V	0V
7	2.3V	2.3V			
8	0.5V	0.5V			
9	0.4V	0.4V			
10	2.5V	2.5V			
11	4.8V	4.8V			
12	3.5V	3.5V			

IC2302

PIN No.	PLAY	REC	PIN No.	PLAY	REC
1	—	—	13	4.8V	4.8V
2	0V	0V	14	3.4V	3.4V
3	1.8V	1.8V	15	2.5V	2.5V
4	1.4V	1.4V	16	2.4V	2.4V
5	1.9V	1.9V	17	2.5V	2.5V
6	1.9V	1.9V	18	0.5V	0.5V
7	1.9V	1.9V	19	0.3V	0.3V
8	1.9V	1.9V	20	0V	0V
9	1.9V	1.9V	21	0V	0V
10	1.9V	1.9V	22	0.6V	0.6V
11	0V	0V	23	—	—
12	0V	0V	24	9.3V	9.3V

REEL SERVO SCHEMATIC DIAGRAM (E4: Page CBA-5) 2/6



VREF
A_12V
REEL_SOL_H
S_REEL_FB
T_REEL_FB
A_GND
A_5V
L2502 100U
VLQEL05T101J
R12V
C2510 16V47
R2525 22K
R2526 82K
C2512 0.01
IC2501 LM324NS-R
C2501 0.047(B)
R2501 6800
R2502 330K
C2516 0.01
IC2505 MC14053BF-R
C2503 0.027(B)
R2504 12K
R2505 330K
C2502 0.0022(B)
IC2506 MC14052BF-R
R2518 120K
R2519 120K(G)
R2503 270K
R2510 100K(G)
R2520 120K(G)
R2521 150K(G)
R2506 150K
R2507 100K(G)
C2519 0.01
S_DAC
T_DAC
AD2
AD3
IC2502 LM324NS-R
C2513 0.01
R2508 100K(G)
C2504 0.0022(B)
R2509 100K(G)
R2523 1000
C2514 0.01
R2522 100K
R2524 1000
C2518 0.01
IC2503 LM393PS-R
SF_AD
SR_AD
P2501
VJS3135
1 REEL_SOL(H)
2 A_5V
3 A_GND
4 A_12V
5 A_GND
6 S_REEL_FG
7 T_REEL_FG
8 SR_PHOTO
9 V_REF
10 S_REEL_FB
11 SF_PHOTO
12 T_REEL_FB
13 CHANGE
14 T_REEL_RSF
15 S_REEL_ET
16 S_REEL_RSF
17 TQU
18 T_REEL_ET
D2501 MA151K-TW
D2502 MA151K-TW
R2516 39K(G)
R2517 22K(G)
IC2507 MC14053BF-R
T_REEL_RSF
S_REEL_RSF
C2517 0.01
R2511 100K
R2512 100K
R2513 100K
R2514 100K
R2515 100K
QR2504 MRN1404TE85R
QR2501 MRN1404TE85R
QR2502 MRN1404TE85R
QR2503 MRN1404TE85R
QR2505 MRN1404TE85R
T_REEL_FG
S_REEL_FG
SF_ON
SR_ON
GAIN_2
GAIN_1
RCUL

Ref No.2500 Series.

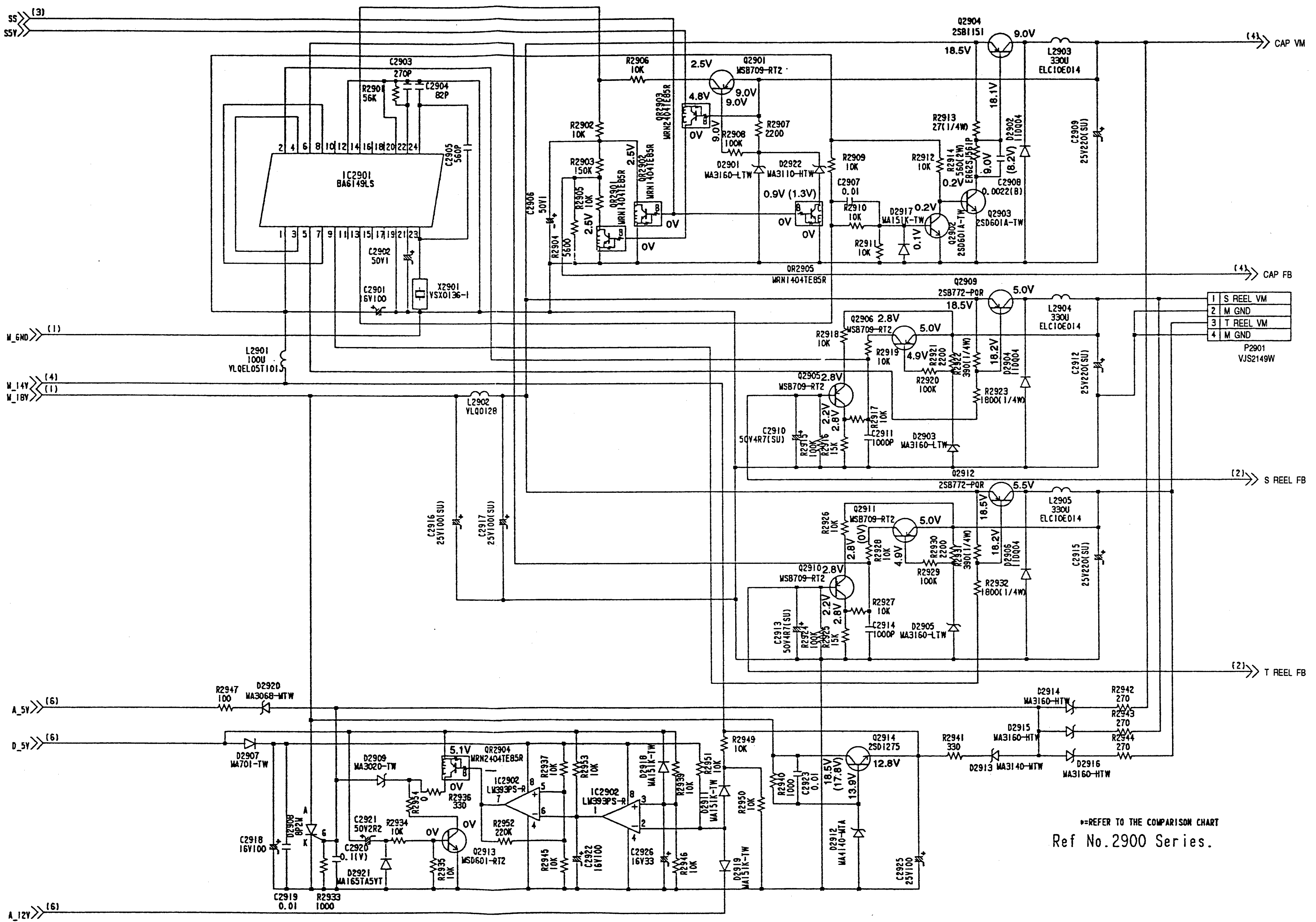
DC-DC CONVERTOR SCHEMATIC DIAGRAM (E4: Page CBA-5)

IC2901

PIN No.	PLAY	REC
1	12.8V	12.8V
2	2.8V	2.8V
3	2.9V	2.9V
4	2.9V	2.9V
5	17.0V	16.4V
6	2.8V	2.8V
7	2.9V	2.9V
8	2.9V	2.9V
9	16.5V	15.5V
10	1.0V	2.0V
11	1.0V	2.0V
12	0V	0V
13	1.5V	1.5V
14	2.5V	2.5V
15	0.5V	0.5V
16	1.2V	2.1V
17	0.5V	0.5V
18	1.2V	2.1V
19	0V	0V
20	0V	0V
21	2.4V	2.4V
22	2.3V	2.3V
23	2.8V	2.8V
24	2.4V	2.4V

IC2902

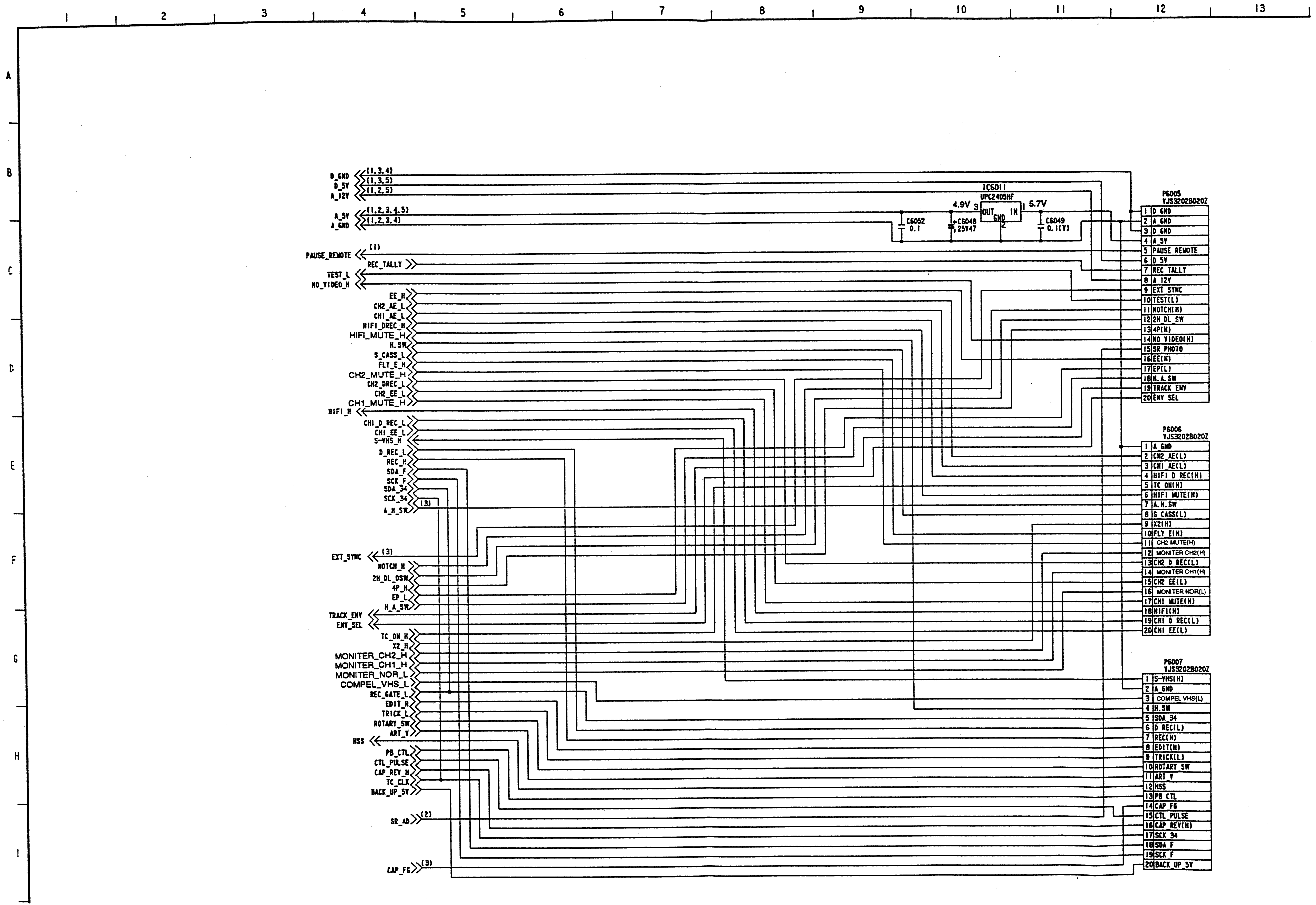
PIN No.	PLAY	REC
1	0V	0V
2	4.9V	4.9V
3	2.5V	2.5V
4	0V	0V
5	2.5V	2.5V
6	0V	0V
7	—	—
8	4.9V	4.9V


SS
S5V (3)
M_GND (1)
M_14V (4)
M_18V (1)
A_5V (6)
D_5V (6)
A_12V (6)
(4) CAP VM
(4) CAP FB
(2) S REEL FB
(2) T REEL FB
1 S REEL VM
2 M GND
3 T REEL VM
4 M GND
P2901
VJS2149W
IC2901
BA6149LS
C2903 270P
C2904 82P
R2901 56K
C2905 560P
C2902 50V1
C2901 16V100
X2901 VSX0136-1
L2901 100U YLQEL05T101
L2902 YLQ0128
C2916 25V100(SU)
C2917 25V100(SU)
R2906 10K
Q2901 MSB709-RT2
2.5V
4.8V
9.0V
R2902 10K
R2903 150K
R2904 5600
R2905 10K
C2906 50V1
QR2901 MRN1404TEB5R
QR2902 MRN1404TEB5R
QR2903 MRN2404TEB5R
QR2905 MRN1404TEB5R
R2907 2200
R2908 100K
D2901 MA3160-LTW
D2922 MA3110-HTW
0.9V (1.3V)
R2909 10K
C2907 0.01
R2910 10K
R2911 10K
D2917 MA151K-TW
R2912 10K
R2913 27(1/4W)
R2914 560(2W) ER62SJ561P
Q2902 2SD601A-TW
Q2903 2SD601A-TW
C2908 0.0022(B)
D2902 11DQ04
Q2904 2SB1151
18.5V
18.1V
L2903 330U ELC10E014
C2909 25V220(SU)
Q2909 2SB772-POR
5.0V
L2904 330U ELC10E014
Q2906 MSB709-RT2
Q2905 MSB709-RT2
R2918 10K
R2919 10K
R2920 100K
R2921 2200
R2922 390(1/4W)
R2923 1800(1/4W)
D2904 11DQ04
C2912 25V220(SU)
C2910 50V4R7(SU)
R2915 100K
R2916 15K
R2917 10K
C2911 1000P
D2903 MA3160-LTW
Q2912 2SB772-POR
5.5V
L2905 330U ELC10E014
Q2911 MSB709-RT2
Q2910 MSB709-RT2
R2926 10K
R2928 10K
R2929 100K
R2930 2200
R2931 390(1/4W)
R2932 1800(1/4W)
D2906 11DQ04
C2915 25V220(SU)
C2913 50V4R7(SU)
R2924 100K
R2925 15K
R2927 10K
C2914 1000P
D2905 MA3160-LTW
R2947 100
D2920 MA3068-MTW
D2907 MA701-TW
D2908 BP2W
C2918 16V100
C2919 0.01
R2933 1000
D2909 MA3020-TW
C2920 0.1(V)
C2921 50V2R2
D2921 MA165TA5YT
R2934 10K
R2935 10K
R2936 330
R2954 0
QR2904 MRN2404TEB5R
5.1V
Q2913 MSD601-RT2
IC2902 LM393PS-R
R2952 220K
R2937 10K
R2945 10K
R2953 10K
C2922 16V100
C2926 16V33
D2918 MA151K-TW
R2939 10K
R2946 10K
R2951 10K
D2911 MA151K-TW
D2919 MA151K-TW
R2949 10K
R2950 10K
R2940 1000
C2923 0.01
Q2914 2SD1275
12.8V
18.5V (17.8V)
13.9V
D2912 MA4140-MTA
C2925 25V100
R2941 330
D2913 MA3140-MTW
D2914 MA3160-HTW
D2915 MA3160-HTW
D2916 MA3160-HTW
R2942 270
R2943 270
R2944 270

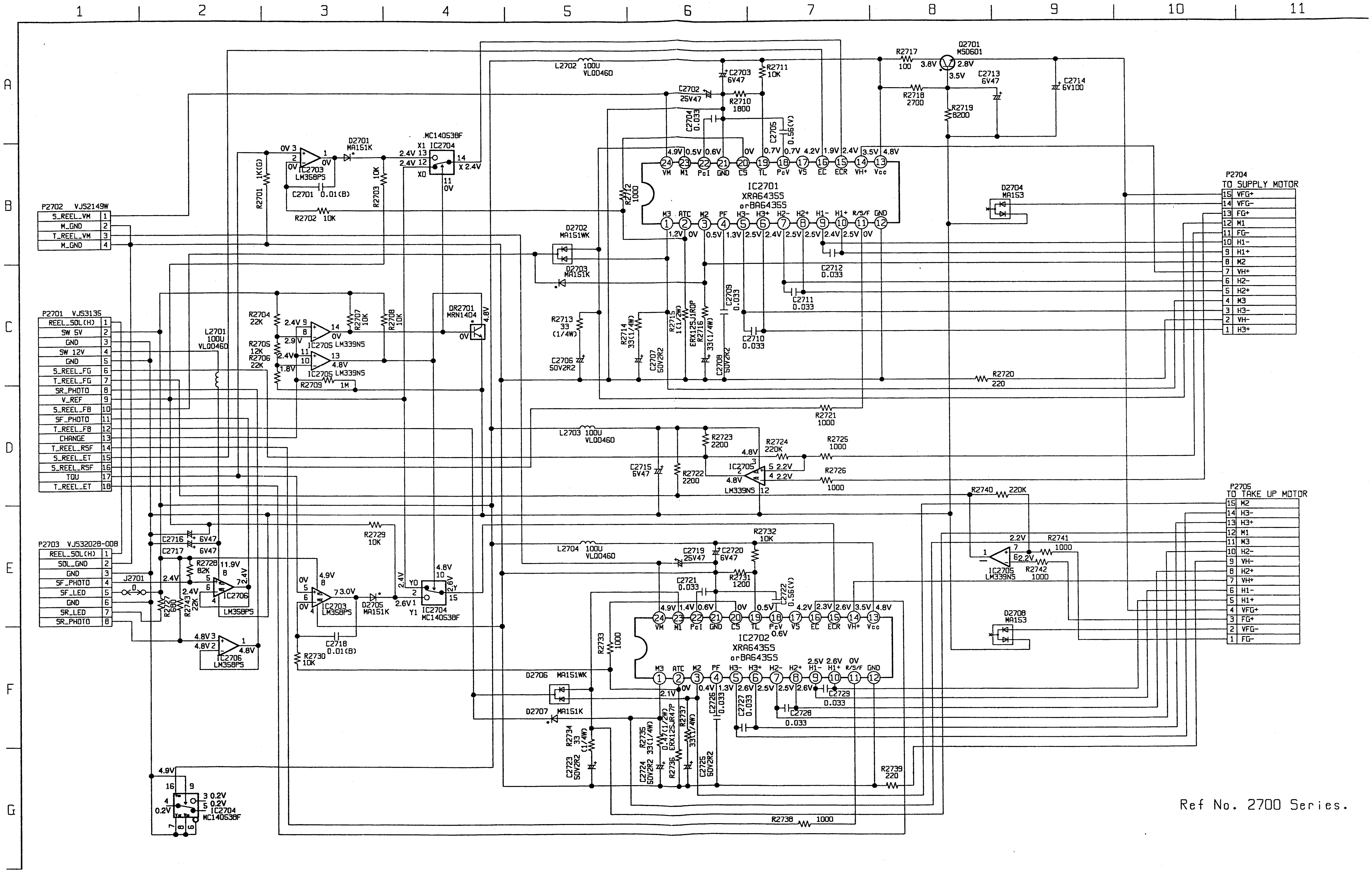
*=REFER TO THE COMPARISON CHART

Ref No.2900 Series.

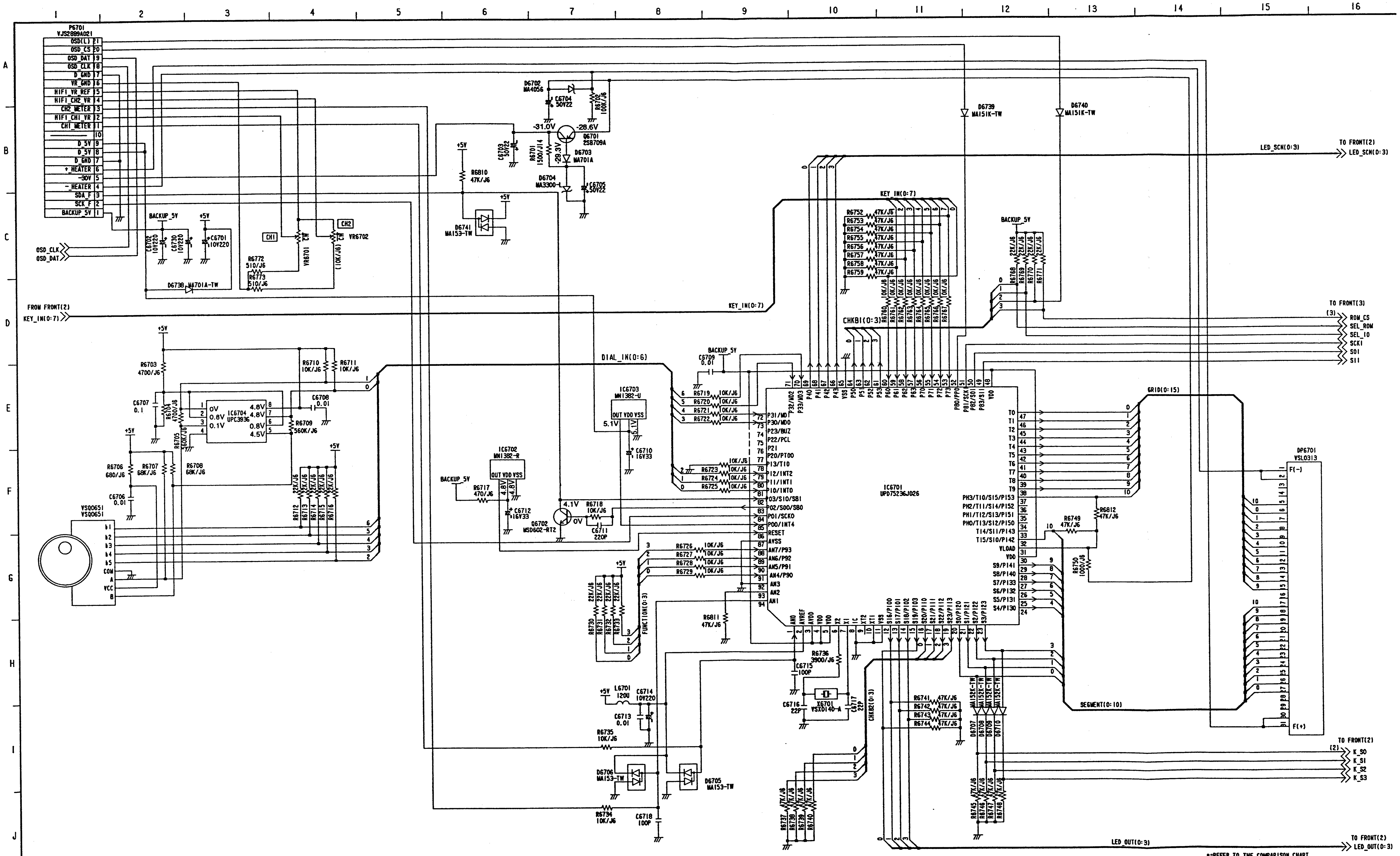
CONNECTION SCHEMATIC DIAGRAM (E4: Page CBA-5) 6/6


1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
D_GND
D_5V
A_12V
(1,3,4)
(1,3,5)
(1,2,5)
A_5V
A_GND
(1,2,3,4,5)
(1,2,3,4)
(1)
PAUSE_REMOTE
REC_TALLY
TEST_L
NO_VIDEO_H
EE_H
CH2_AE_L
CH1_AE_L
HIFI_DREC_H
HIFI_MUTE_H
H.SW
S_CASS_L
FLY_E_H
CH2_MUTE_H
CH2_DREC_L
CH2_EE_L
CH1_MUTE_H
HIFI_H
CH1_D_REC_L
CH1_EE_L
S-VHS_H
D_REC_L
REC_H
SDA_F
SCK_F
SDA_34
SCK_34
(3)
A_H_SW
(3)
EXT_SYNC
NOTCH_H
2H_DL_OSW
4P_H
EP_L
H_A_SW
TRACK_ENV
ENV_SEL
TC_ON_H
X2_H
MONITER_CH2_H
MONITER_CH1_H
MONITER_NOR_L
COMPEL_VHS_L
REC_GATE_L
EDIT_H
TRICK_L
ROTARY_SW
ART_V
HSS
PB_CTL
CTL_PULSE
CAP_REV_H
TC_CLK
BACK_UP_5V
(2)
SR_AD
(3)
CAP_FG
IC6011
UPC2405HF
4.9V
3
OUT
GND
IN
1
2
5.7V
C6052
0.1
C6048
25V47
C6049
0.1(V)
P6005
VJS3202B020Z
1 D GND
2 A GND
3 D GND
4 A 5V
5 PAUSE REMOTE
6 D 5V
7 REC TALLY
8 A 12V
9 EXT SYNC
10 TEST(L)
11 NOTCH(H)
12 2H DL SW
13 4P(H)
14 NO VIDEO(H)
15 SR PHOTO
16 EE(H)
17 EP(L)
18 H.A.SW
19 TRACK ENV
20 ENV SEL
P6006
VJS3202B020Z
1 A GND
2 CH2 AE(L)
3 CH1 AE(L)
4 HIFI D REC(H)
5 TC ON(H)
6 HIFI MUTE(H)
7 A.H.SW
8 S CASS(L)
9 X2(H)
10 FLY E(H)
11 CH2 MUTE(H)
12 MONITER CH2(H)
13 CH2 D REC(L)
14 MONITER CH1(H)
15 CH2 EE(L)
16 MONITER NOR(L)
17 CH1 MUTE(H)
18 HIFI(H)
19 CH1 D REC(L)
20 CH1 EE(L)
P6007
VJS3202B020Z
1 S-VHS(H)
2 A GND
3 COMPEL VHS(L)
4 H.SW
5 SDA 34
6 D REC(L)
7 REC(H)
8 EDIT(H)
9 TRICK(L)
10 ROTARY SW
11 ART V
12 HSS
13 PB CTL
14 CAP FG
15 CTL PULSE
16 CAP REV(H)
17 SCK 34
18 SDA F
19 SCK F
20 BACK UP 5V

REEL DRIVE SCHEMATIC DIAGRAM (E11: Page CBA-3)


1 2 3 4 5 6 7 8 9 10 11
A B C D E F G
P2702 VJS2149W
1 S_REEL_VM
2 M_GND
3 T_REEL_VM
4 M_GND
P2701 VJS3135
1 REEL_SOL(H)
2 SW 5V
3 GND
4 SW 12V
5 GND
6 S_REEL_FG
7 T_REEL_FG
8 SR_PHOTO
9 V_REF
10 S_REEL_FB
11 SF_PHOTO
12 T_REEL_FB
13 CHANGE
14 T_REEL_RSF
15 S_REEL_ET
16 S_REEL_RSF
17 TOU
18 T_REEL_ET
P2703 VJS32028-008
1 REEL_SOL(H)
2 SOL_GND
3 GND
4 SF_PHOTO
5 SF_LED
6 GND
7 SR_LED
8 SR_PHOTO
J2701
P2704
TO SUPPLY MOTOR
15 VFG+
14 VFG-
13 FG+
12 M1
11 FG-
10 H1-
9 H1+
8 M2
7 VH+
6 H2-
5 H2+
4 M3
3 H3-
2 VH-
1 H3+
P2705
TO TAKE UP MOTOR
15 M2
14 H3-
13 H3+
12 M1
11 M3
10 H2-
9 VH-
8 H2+
7 VH+
6 H1-
5 H1+
4 VFG+
3 FG+
2 VFG-
1 FG-
IC2701
XRA6435S
orBA6435S
IC2702
XRA6435S
orBA6435S
VM M1 PcI GND CS TL PcV VS EC ECR VH+ Vcc
M3 ATC M2 PF H3- H3+ H2- H2+ H1- H1+ R/S/F GND
IC2703 LM358PS
IC2704 MC14053BF
IC2705 LM339NS
IC2706 LM358PS
Q2701 MSD601
D2701 MA151K
D2702 MA151WK
D2703 MA151K
D2704 MA153
D2705 MA151K
D2706 MA151WK
D2707 MA151K
D2708 MA153
DR2701 MRN1404
L2701 100U VL00460
L2702 100U VL00460
L2703 100U VL00460
L2704 100U VL00460
R2701 1K(G)
R2702 10K
R2703 10K
R2704 22K
R2705 12K
R2706 22K
R2707 10K
R2708 10K
R2709 1M
R2710 1800
R2711 10K
R2712 1000
R2713 33 (1/4W)
R2714 33(1/4W)
R2715 1(1/2W)
R2716 ERX125J1R0P
R2717 100
R2718 2700
R2719 8200
R2720 220
R2721 1000
R2722 2200
R2723 2200
R2724 220K
R2725 1000
R2726 1000
R2728 82K
R2729 10K
R2730 10K
R2731 1200
R2732 10K
R2733 1000
R2734 33 (1/4W)
R2735 33(1/4W)
R2736 ERX125JR47P
R2737 33(1/4W)
R2738 1000
R2739 220
R2740 220K
R2741 1000
R2742 1000
R2743 22K
R2744 680
C2701 0.01(B)
C2702 25V47
C2703 6V47
C2704 0.033
C2705 0.56(V)
C2706 50V2R2
C2707 50V2R2
C2708 50V2R2
C2709 0.033
C2710 0.033
C2711 0.033
C2712 0.033
C2713 6V47
C2714 6V100
C2715 6V47
C2716 6V47
C2717 6V47
C2718 0.01(B)
C2719 25V47
C2720 6V47
C2721 0.033
C2722 0.56(V)
C2723 50V2R2
C2724 50V2R2
C2725 50V2R2
C2726 0.033
C2727 0.033
C2728 0.033
C2729 0.033
Ref No. 2700 Series.

FRONT (1) SCHEMATIC DIAGRAM (E10: Page CBA-4) 1/4


1
2
3
4
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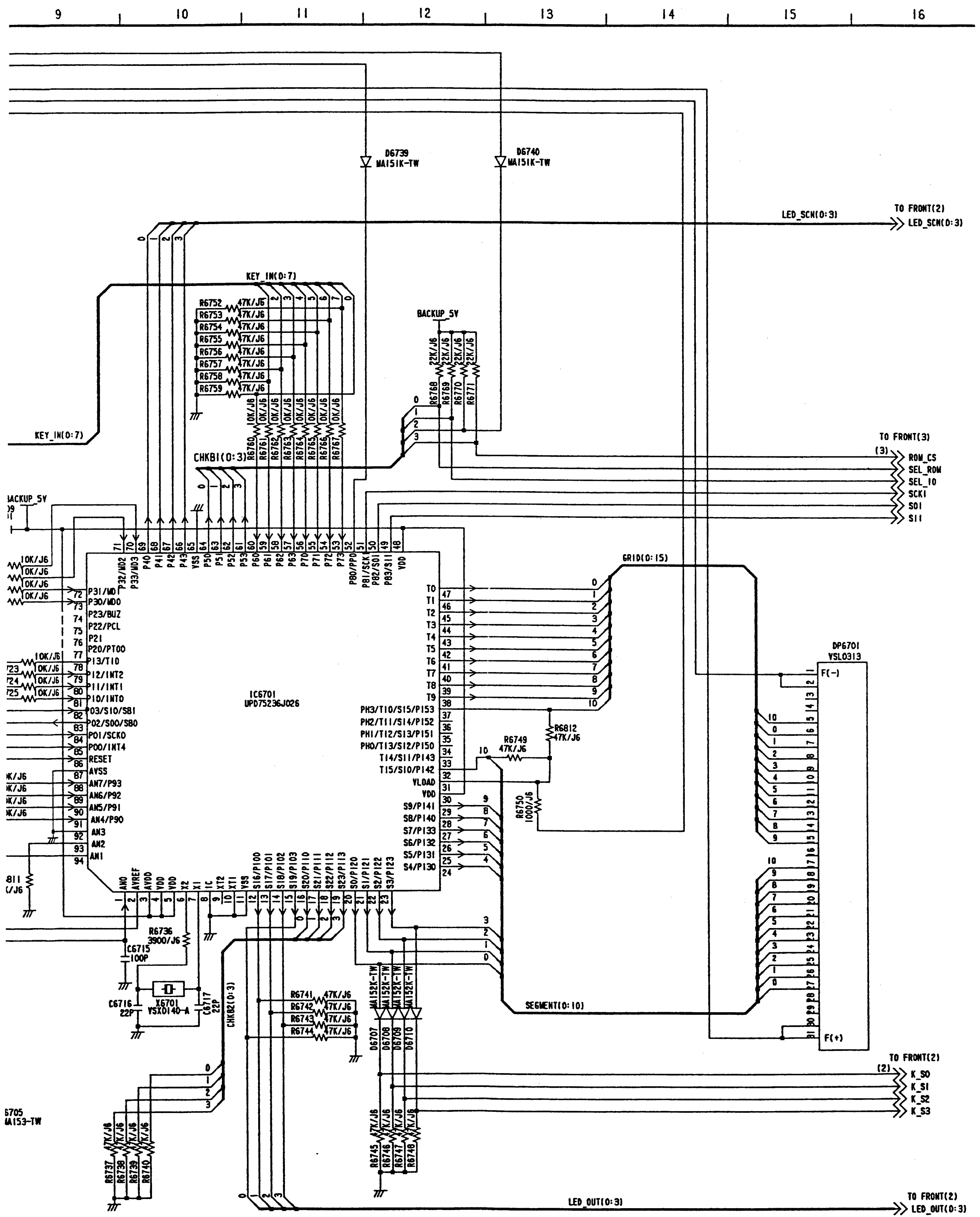
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
P6701
VJS2889A021
OSD(L)
OSD_CS
OSD_DAT
OSD_CLK
D_GND
VR_GND
HIFI_VR_REF
HIFI_CH2_VR
CH2_METER
HIFI_CH1_VR
CH1_METER
D_5V
D_GND
+_HEATER
-30V
-_HEATER
SDA_F
SCK_F
BACKUP_5V
OSD_CLK
OSD_DAT
D6702
MA4056
C6704
50Y22
R6702
10K/J6
-31.0V
-28.6V
Q6701
2SB709A
R6701
1500/J14
-29.3V
D6703
MA701A
D6704
MA3300-L
C6705
50Y22
C6703
50Y22
+5V
R6810
47K/J6
D6741
MA153-TW
D6739
MA151K-TW
D6740
MA151K-TW
LED_SCN(0:3)
TO FRONT(2)
LED_SCN(0:3)
BACKUP_5V
C6702
10Y220
C6730
10Y220
C6701
10Y220
CH1
CH2
VR6701
VR6702
R6772
510/J6
R6773
510/J6
D6738
MA701A-TW
FROM FRONT(2)
KEY_IN(0:7)
KEY_IN(0:7)
R6752
R6753
R6754
R6755
R6756
R6757
R6758
R6759
47K/J6
R6760
R6761
R6762
R6763
R6764
R6765
R6766
R6767
10K/J6
CHKB1(0:3)
R6768
R6769
R6770
R6771
22K/J6
TO FRONT(3)
ROM_CS
SEL_ROM
SEL_IO
SCK1
SO1
SI1
R6703
4700/J6
C6707
0.1
R6704
4700/J6
IC6704
UPC3936
0V
0.8V
0.1V
4.8V
4.8V
0.8V
4.5V
R6705
560K/J6
R6706
680/J6
R6707
68K/J6
R6708
68K/J6
R6709
560K/J6
R6710
10K/J6
R6711
10K/J6
C6708
0.01
C6706
0.01
VSQ0651
R6712
R6713
R6714
R6715
R6716
22K/J6
DIAL_IN(0:6)
IC6703
MN1382-U
OUT VDD VSS
5.1V
C6710
16Y33
IC6702
MN1382-R
4.8V
BACKUP_5V
R6717
470/J6
C6712
16Y33
Q6702
MSD602-RT2
4.1V
0V
R6718
10K/J6
C6711
220P
BACKUP_5V
C6709
0.01
R6719
R6720
R6721
R6722
R6723
R6724
R6725
10K/J6
IC6701
UPD75236J026
P31/MD1
P30/MD0
P23/BUZ
P22/PCL
P21
P20/PTO0
P13/TI0
P12/INT2
P11/INT1
P10/INT0
P03/SI0/SB1
P02/SO0/SB0
P01/SCK0
P00/INT4
RESET
AVSS
AN7/P93
AN6/P92
AN5/P91
AN4/P90
AN3
AN2
AN1
T0
T1
T2
T3
T4
T5
T6
T7
T8
T9
PH3/T10/S15/P153
PH2/T11/S14/P152
PH1/T12/S13/P151
PH0/T13/S12/P150
T14/S11/P143
T15/S10/P142
VLOAD
VDD
S9/P141
S8/P140
S7/P133
S6/P132
S5/P131
S4/P130
GRID(0:15)
R6749
47K/J6
R6812
47K/J6
R6750
1000/J6
DP6701
VSL0313
F(-)
F(+)
SEGMENT(0:10)
R6726
R6727
R6728
R6729
10K/J6
R6730
R6731
R6732
R6733
22K/J6
FUNCTION(0:3)
R6811
47K/J6
R6736
3900/J6
C6715
100P
X6701
VSX0140-A
C6716
22P
C6717
22P
CHKB2(0:3)
R6741
R6742
R6743
R6744
47K/J6
D6707
D6708
D6709
D6710
MA152K-TW
L6701
120U
C6714
10Y220
C6713
0.01
R6735
10K/J6
D6706
MA153-TW
D6705
MA153-TW
R6734
10K/J6
C6718
100P
R6737
R6738
R6739
R6740
47K/J6
R6745
R6746
R6747
R6748
47K/J6
TO FRONT(2)
K_S0
K_S1
K_S2
K_S3
LED_OUT(0:3)
TO FRONT(2)
LED_OUT(0:3)

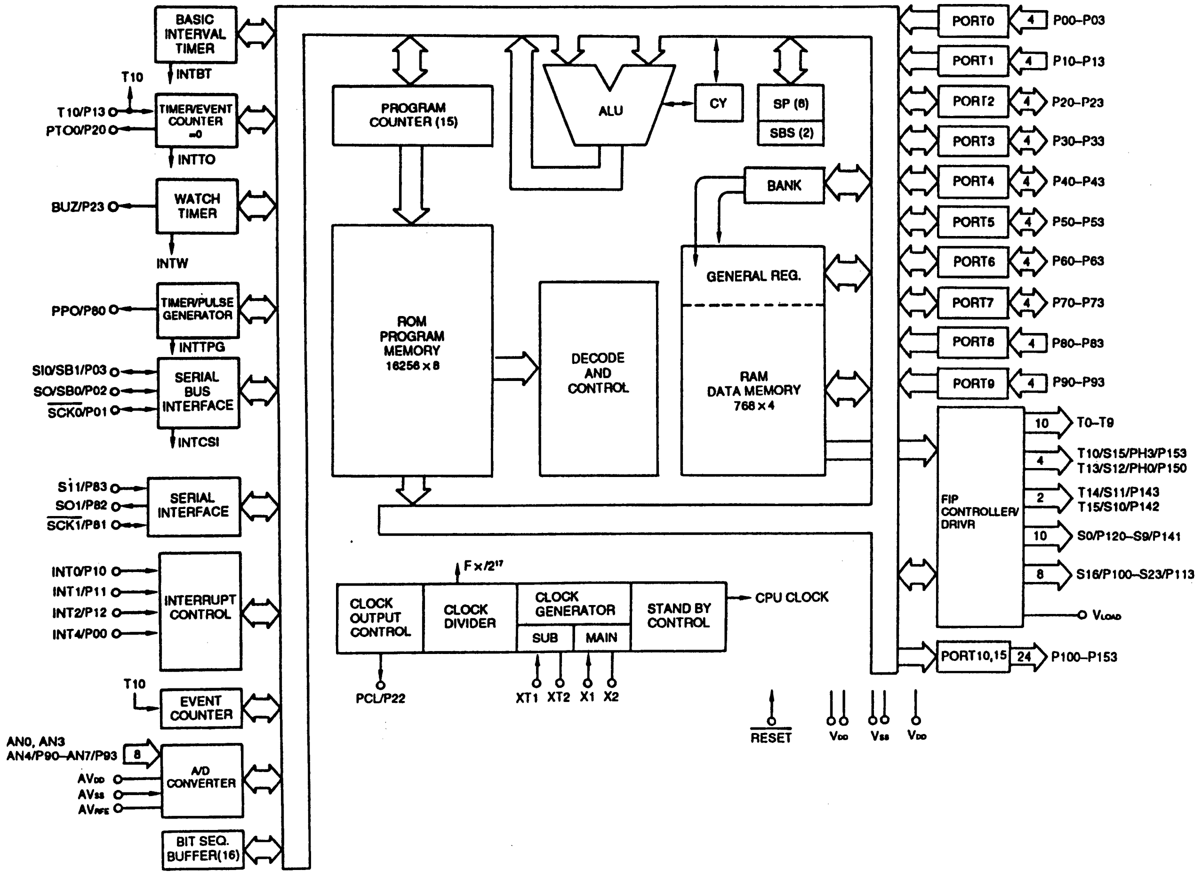
*=REFER TO THE COMPARISON CHART

Ref No.6700 Series.


9
10
11
12
13
14
15
16
D6739
MA151K-TW
D6740
MA151K-TW
LED_SCN(0:3)
TO FRONT(2)
LED_SCN(0:3)
KEY_IN(0:7)
R6752 47K/J6
R6753
R6754
R6755
R6756
R6757
R6758
R6759
BACKUP_5V
R6768
R6769
R6770
R6771
22K/J6
KEY_IN(0:7)
TO FRONT(3)
(3)
ROM_CS
SEL_ROM
SEL_IO
SCKI
SOI
SII
CHKB1(0:3)
R6760
R6761
R6762
R6763
R6764
R6765
R6766
R6767
10K/J6
BACKUP_5V
GRID(0:15)
IC6701
UPD75236J026
P31/MD1
P30/MD0
P23/BUZ
P22/PCL
P21
P20/PTO0
P13/TI0
P12/INT2
P11/INT1
P10/INT0
P03/SI0/SB1
P02/SO0/SB0
P01/SCK0
P00/INT4
RESET
AVSS
AN7/P93
AN6/P92
AN5/P91
AN4/P90
AN3
AN2
AN1
T0
T1
T2
T3
T4
T5
T6
T7
T8
T9
PH3/T10/S15/P153
PH2/T11/S14/P152
PH1/T12/S13/P151
PH0/T13/S12/P150
T14/S11/P143
T15/S10/P142
VLOAD
VDD
S9/P141
S8/P140
S7/P133
S6/P132
S5/P131
S4/P130
R6812
47K/J6
R6749
47K/J6
R6750
1000/J6
DP6701
VSL0313
F(-)
F(+)
R6736
3900/J6
C6715
100P
C6716
22P
X6701
VSX0140-A
C6717
22P
CHKB2(0:3)
R6741 47K/J6
R6742
R6743
R6744
D6707
D6708
D6709
D6710
MA152K-TW
SEGMENT(0:10)
TO FRONT(2)
(2)
K_S0
K_S1
K_S2
K_S3
D6705
MA153-TW
R6737
R6738
R6739
R6740
R6745
R6746
R6747
R6748
LED_OUT(0:3)
TO FRONT(2)
LED_OUT(0:3)

*=REFER TO THE COMPARISON CHART
Ref No.6700 Series.

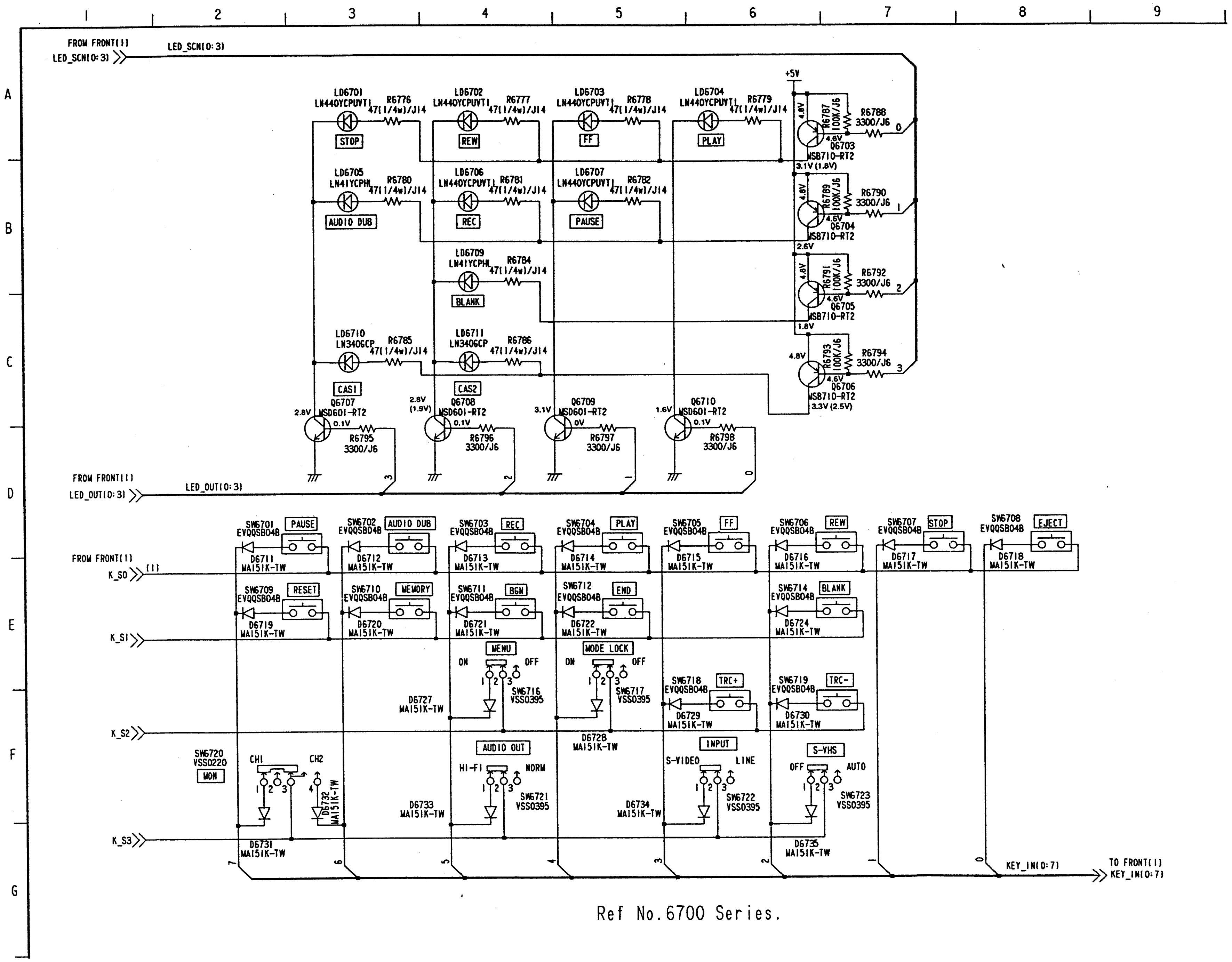
IC6701 (UPD75236J026)


BASIC INTERVAL TIMER
INTBT
T10
T10/P13
PTO0/P20
TIMER/EVENT COUNTER #0
INTT0
BUZ/P23
WATCH TIMER
INTW
PPO/P80
TIMER/PULSE GENERATOR
INTTPG
SI0/SB1/P03
SO/SB0/P02
SCK0/P01
SERIAL BUS INTERFACE
INTCSI
SI1/P83
SO1/P82
SCK1/P81
SERIAL INTERFACE
INT0/P10
INT1/P11
INT2/P12
INT4/P00
INTERRUPT CONTROL
T10
EVENT COUNTER
AN0, AN3
AN4/P90–AN7/P93
8
AVDD
AVSS
AVREF
A/D CONVERTER
BIT SEQ. BUFFER(16)
PROGRAM COUNTER (15)
ALU
CY
SP (8)
SBS (2)
BANK
GENERAL REG.
ROM PROGRAM MEMORY 16256 x 8
DECODE AND CONTROL
RAM DATA MEMORY 768 x 4
Fx/2¹⁷
CLOCK OUTPUT CONTROL
CLOCK DIVIDER
CLOCK GENERATOR
SUB
MAIN
STAND BY CONTROL
CPU CLOCK
PCL/P22
XT1
XT2
X1
X2
RESET
VDD
VSS
VDD
PORT0
P00–P03
PORT1
P10–P13
PORT2
P20–P23
PORT3
P30–P33
PORT4
P40–P43
PORT5
P50–P53
PORT6
P60–P63
PORT7
P70–P73
PORT8
P80–P83
PORT9
P90–P93
4
FIP CONTROLLER/DRIVR
10
T0–T9
T10/S15/PH3/P153
T13/S12/PH0/P150
2
T14/S11/P143
T15/S10/P142
S0/P120–S9/P141
8
S16/P100–S23/P113
VLOAD
PORT10,15
24
P100–P153

IC6701

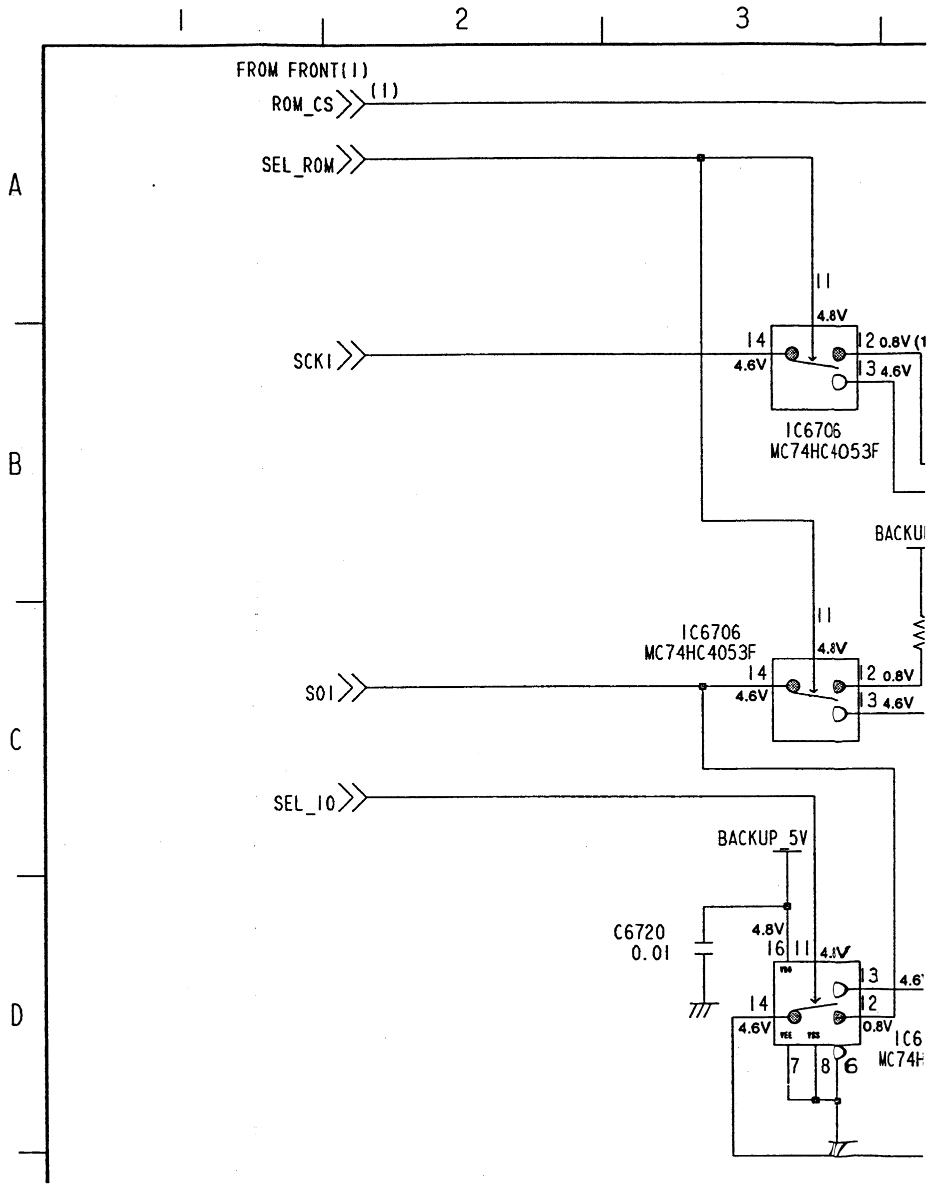
PIN No.	PLAY	REC	PIN No.	PLAY	REC	PIN No.	PLAY	REC
1	0.2V	0V	33	0V	0V	65	0V	0V
2	4.8V	4.8V	34	0V	0V	66	3.7V	3.7V
3	4.8V	4.8V	35	0V	0V	67	3.6V	3.6V
4	4.8V	4.8V	36	0V	0V	68	3.7V	3.7V
5	4.8V	4.8V	37	-23.0V	-23.0V	69	3.7V	3.7V
6	2.3V	2.3V	38	-23.0V	-23.0V	70	0V	0V
7	2.1V	2.1V	39	-23.3V	-23.3V	71	4.8V	4.8V
8	0V	0V	40	-24.0V	-24.0V	72	4.8V	4.8V
9	4.8V	4.8V	41	-23.7V	-23.7V	73	4.8V	4.8V
10	0V	0V	42	-23.0V	-23.0V	74	0V	0V
11	0V	0V	43	-23.0V	-23.0V	75	2.1V	2.1V
12	0V	0V	44	-23.0V	-23.0V	76	0V	0V
13	4.5V	2.3V	45	-23.0V	-23.0V	77	0V	0V
14	4.5V	1.2V	46	-23.2V	-23.2V	78	0V	0V
15	0V	1.0V	47	-23.2V	-23.2V	79	4.8V	4.8V
16	0V	0V	48	4.8V	4.8V	80	0V	0V
17	0V	0V	49	4.8V	4.8V	81	4.8V	4.8V
18	0V	0V	50	0.1V	0.1V	82	4.0V	4.0V
19	0V	0V	51	4.7V	4.7V	83	0.6V	0.6V
20	-8.0V	-8.0V	52	4.4V	3.9V	84	4.5V	4.5V
21	-14.6V	-10.0V	53	0V	0V	85	5.1V	5.1V
22	-10.7V	-8.0V	54	0V	0V	86	4.8V	4.8V
23	-10.9V	-10.9V	55	0V	0V	87	0V	0V
24	-10.0V	-10.0V	56	0V	0V	88	4.8V	4.8V
25	-10.0V	-15.0V	57	0V	0V	89	4.8V	4.8V
26	-17.5V	-16.0V	58	2.7V	2.7V	90	4.8V	4.8V
27	-25.8V	-26.2V	59	0V	0V	91	4.8V	4.8V
28	-18.7V	-18.7V	60	0V	0V	92	0V	0V
29	-8.9V	-8.9V	61	0V	0V	93	0V	0V
30	4.8V	4.8V	62	4.8V	4.8V	94	1.5V	0V
31	-26.0V	-26.0V	63	0V	0V			
32	-23.7V	-23.7V	64	4.8V	4.8V			

FRONT (2) SCHEMATIC DIAGRAM (E10: Page CBA-4) 2/4

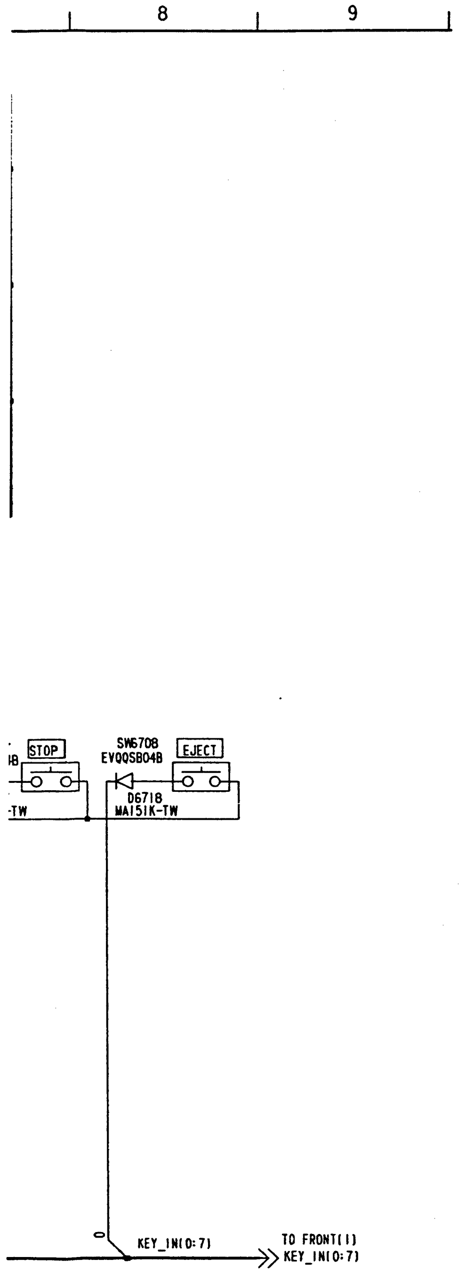

FROM FRONT(1)
LED_SCN(0:3)
LED_OUT(0:3)
K_S0
K_S1
K_S2
K_S3
KEY_IN(0:7)
TO FRONT(1)
KEY_IN(0:7)
+5V
LD6701 LN440YCPUVT1
LD6702 LN440YCPUVT1
LD6703 LN440YCPUVT1
LD6704 LN440YCPUVT1
LD6705 LN41YCPH
LD6706 LN440YCPUVT1
LD6707 LN440YCPUVT1
LD6709 LN41YCPH
LD6710 LN340GCP
LD6711 LN340GCP
STOP
REW
FF
PLAY
AUDIO DUB
REC
PAUSE
BLANK
CAS1
CAS2
Q6703 2SB710-RT2
Q6704 2SB710-RT2
Q6705 2SB710-RT2
Q6706 2SB710-RT2
Q6707 2SD601-RT2
Q6708 2SD601-RT2
Q6709 2SD601-RT2
Q6710 2SD601-RT2
SW6701 EVQQSB04B PAUSE
SW6702 EVQQSB04B AUDIO DUB
SW6703 EVQQSB04B REC
SW6704 EVQQSB04B PLAY
SW6705 EVQQSB04B FF
SW6706 EVQQSB04B REW
SW6707 EVQQSB04B STOP
SW6708 EVQQSB04B EJECT
SW6709 EVQQSB04B RESET
SW6710 EVQQSB04B MEMORY
SW6711 EVQQSB04B BGN
SW6712 EVQQSB04B END
SW6714 EVQQSB04B BLANK
MENU
MODE LOCK
SW6716 VSS0395
SW6717 VSS0395
SW6718 EVQQSB04B TRC+
SW6719 EVQQSB04B TRC−
SW6720 VSS0220 MON
CH1
CH2
AUDIO OUT
HI-FI
NORM
SW6721 VSS0395
INPUT
S-VIDEO
LINE
SW6722 VSS0395
S-VHS
OFF
AUTO
SW6723 VSS0395
D6711 MA151K-TW
D6731 MA151K-TW
D6735 MA151K-TW

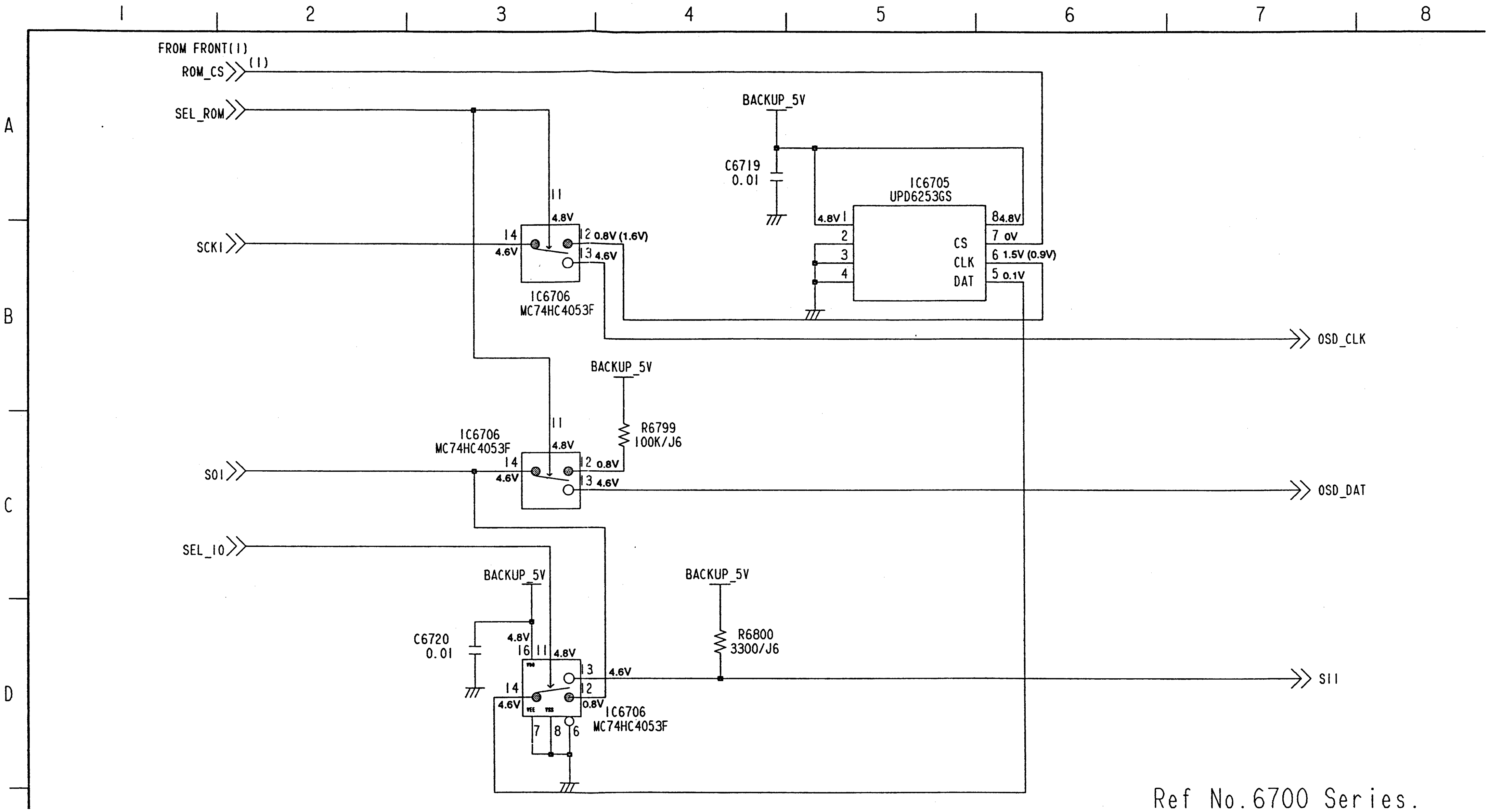
Ref No.6700 Series.

FRONT (3) SCHEMATIC DIAGRAM (E10: Page CBA-4


FROM FRONT(1)
ROM_CS
SEL_ROM
SCK1
SO1
SEL_IO
BACKUP_5V
IC6705 MC74HC4053F
IC6706 MC74HC4053F
C6720 0.01

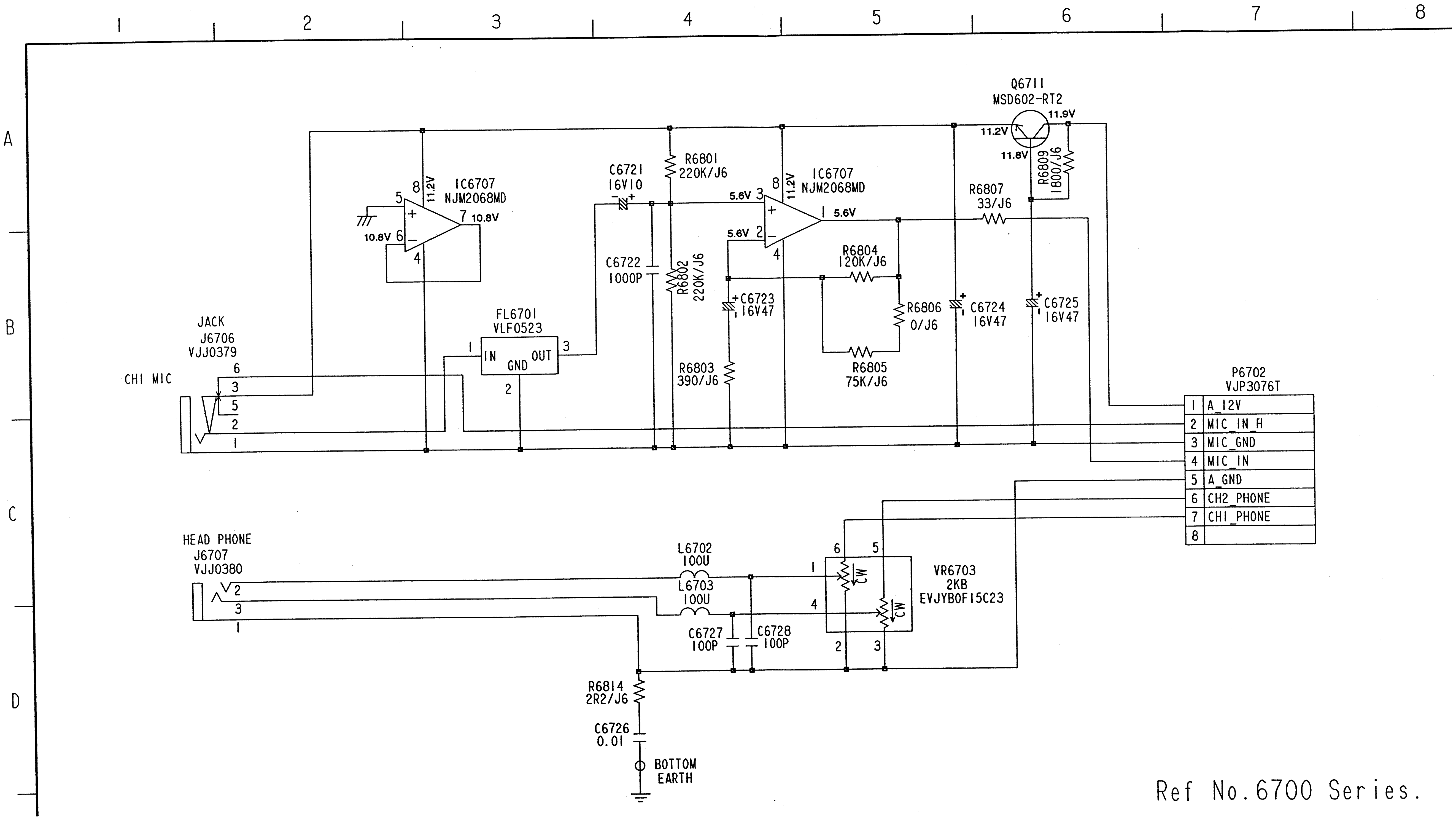
FRONT (3) SCHEMATIC DIAGRAM (E10: Page CBA-4) 3/4


8
9
STOP
SW6708
EVQQSB04B
EJECT
D6718
MA151K-TW
-TW
KEY_IN(0:7)
TO FRONT(1)
KEY_IN(0:7)


1
2
3
4
5
6
7
8
A
B
C
D
FROM FRONT(1)
ROM_CS
(1)
SEL_ROM
BACKUP_5V
C6719
0.01
IC6705
UPD6253GS
4.8V 1
2
3
4
8 4.8V
7 0V
6 1.5V (0.9V)
5 0.1V
CS
CLK
DAT
11
4.8V
14
4.6V
12 0.8V (1.6V)
13 4.6V
IC6706
MC74HC4053F
SCK1
OSD_CLK
BACKUP_5V
R6799
100K/J6
IC6706
MC74HC4053F
11
4.8V
14
4.6V
12 0.8V
13 4.6V
SO1
OSD_DAT
SEL_IO
BACKUP_5V
C6720
0.01
4.8V
16
11
4.8V
14
4.6V
13
12
0.8V
4.6V
7
8
6
IC6706
MC74HC4053F
BACKUP_5V
R6800
3300/J6
SI1

Ref No.6700 Series.

FRONT (4) SCHEMATIC DIAGRAM (E10: Page CBA-4) 4/4



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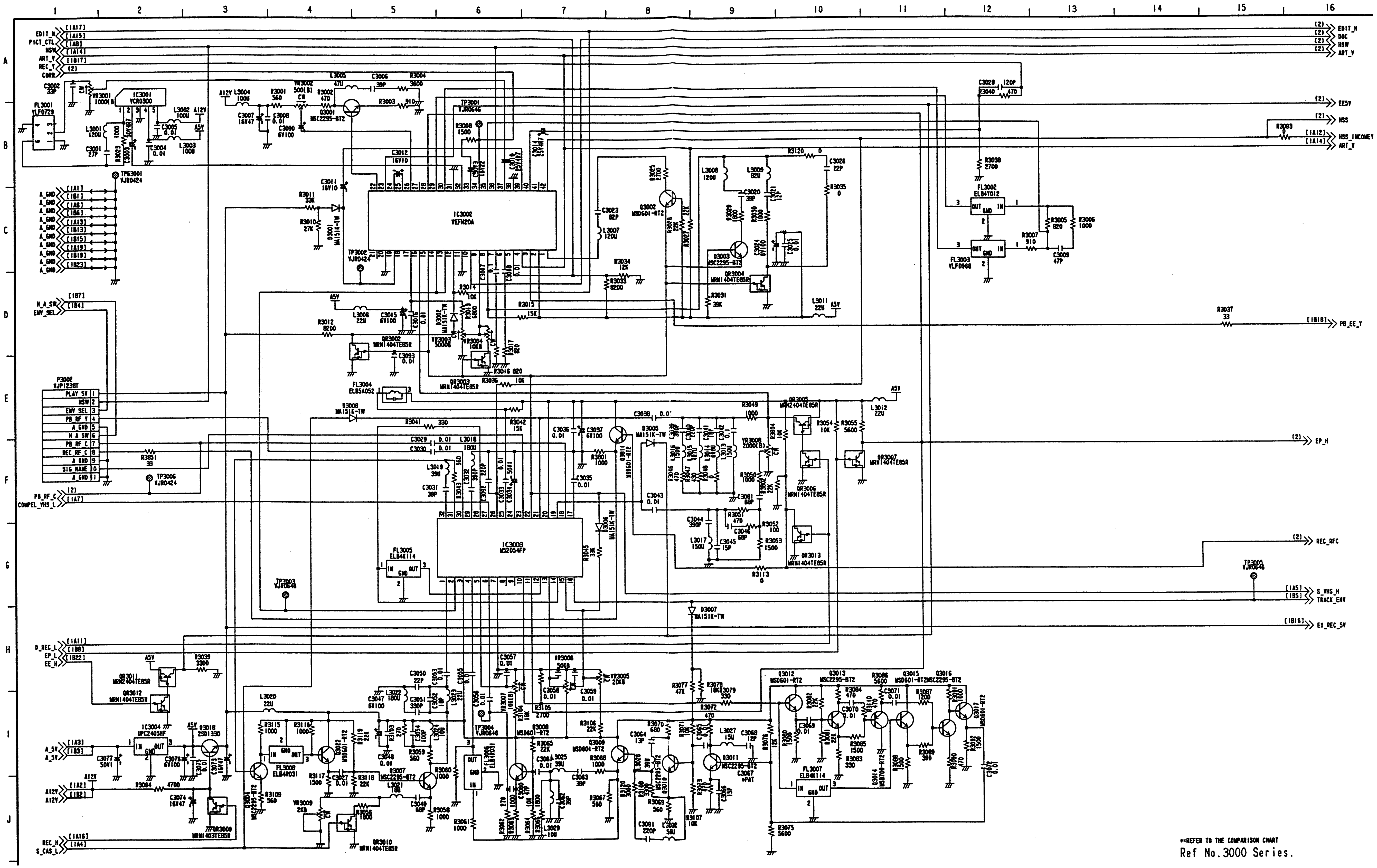
8
A
B
C
D
Q6711
MSD602-RT2
11.9V
11.2V
11.8V
R6809
1800/J6
IC6707
NJM2068MD
11.2V
10.8V
C6721
16V10
R6801
220K/J6
5.6V
R6807
33/J6
C6722
1000P
R6802
220K/J6
R6804
120K/J6
C6723
16V47
R6806
0/J6
C6724
16V47
C6725
16V47
JACK
J6706
VJJ0379
CHI MIC
FL6701
VLF0523
IN
GND
OUT
R6803
390/J6
R6805
75K/J6
P6702
VJP3076T
A_12V
MIC_IN_H
MIC_GND
MIC_IN
A_GND
CH2_PHONE
CH1_PHONE
HEAD PHONE
J6707
VJJ0380
L6702
100U
L6703
100U
C6727
100P
C6728
100P
VR6703
2KB
EVJYB0F15C23
CW
R6814
2R2/J6
C6726
0.01
BOTTOM
EARTH

Ref No.6700 Series.

VIDEO (1) SCHEMATIC DIAGRAM (E5: Page CBA-7) 1/2


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J
EDIT_H
DOC
PICT_CTL
HSW
ART_V
REC_T
CORR
A_GND
H_A_SW
ENV_SEL
PB_RF_C
COMPEL_VHS_L
D_REC_L
EP_L
EE_H
A_5V
A12V
REC_H
S_CAS_L
EESV
HSS
HSS_INCOMEY
PB_EE_Y
EP_H
REC_RFC
S_VHS_H
TRACK_ENV
EX_REC_5V
IC3001 VCR0300
IC3002 VEFH20A
IC3003 M52054FP
IC3004 UPC2405HF
FL3001 VLF0729
FL3002 ELB4T012
FL3003 VLF0968
FL3004 ELB5A052
FL3005 ELB4K114
FL3006 ELB4R031
FL3007 ELB4K114
P3002 VJP1238T
PLAY_5V
HSW
ENV_SEL
PB_RF_Y
A_GND
H_A_SW
PB_RF_C
REC_RF_C
A_GND
SIG_NAME
A_GND
TP3001 VJR0646
TP3002 VJR0424
TP3003 VJR0646
TP3004 VJR0646
TP3005 VJR0646
TP3006 VJR0424
TP63001 VJR0424

**REFER TO THE COMPARISON CHART

Ref No.3000 Series.

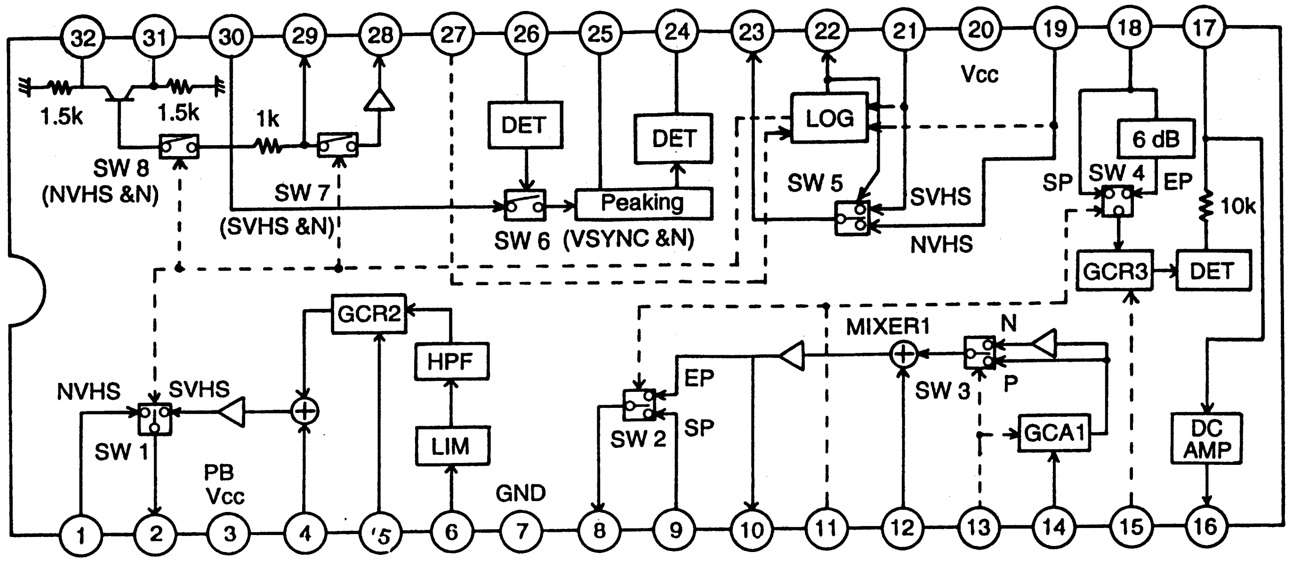
VIDEO 1 ICs DC VOLTAGE

REF NO.	IC3001															
PIN NO.	1	2	3	4	5											
PLAY	2.6	2.2	0	4.8	11.7											
REC	2.6	2.2	0	4.8	11.7											
REF NO.	IC3002															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	2.9	4.8	2.3	0	2.8	1.9	1.3	1.7	1.0	4.8	0	2.3	2.5	2.5	0.2	4.8
REC	2.9	4.8	2.3	0	2.8	1.9	4.3	1.7	1.0	1.2	0	0	0	0	0.2	3.4
REF NO.	IC3002															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	4.8	3.0	1.8	0	4.8	3.2	0.5	1.2	2.9	2.8	4.8	0	1.8	1.8	0	1.4
REC	4.8	3.0	1.8	0	2.1	3.2	4.9	1.2	2.9	2.8	4.8	0	1.8	1.8	0	1.4
REF NO.	IC3002															
PIN NO.	33	34	35	36	37	38	39	40	41	42						
PLAY	2.7	2.0	1.7	4.7	2.1	0	2.3	3.3	0.3	0.4						
REC	2.7	2.0	2.0	4.7	2.1	0	2.3	2.8	0.3	0.4						
REF NO.	IC3003															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	3.9	2.5	0	0	0.7	3.2	0	1.3	2.8	1.9	0	2.5	2.6	2.5	1.4	2.0
REC	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.	IC3003															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	3.1	2.8	1.0	4.9	4.5	0.1	0.3	2.7	3.9	0.4	4.8	2.5	1.9	3.3	1.2	3.4
REC	0	0	2.4	4.9	4.5	0	1.6	2.5	4.3	0.4	4.8	0	0	0	0	0
REF NO.	IC3004															
PIN NO.	1	2	3													
PLAY	5.7	0	4.9													
REC	5.7	0	4.9													

VIDEO 1 TRANSISTORs DC VOLTAGE

REF NO.	Q3001			Q3002			Q3003			Q3004			Q3005		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	2.5	7.6	3.2	0.1	0.1	0.8	0.1	0.2	0.8	0.5	4.2	1.2	0	0	0.4
REC	2.5	7.6	3.2	0.1	0.1	0.8	0.1	0.2	0.8	0	0.1	0	0	0	0.4
REF NO.	Q3006			Q3007			Q3008			Q3009			Q3010		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0	0.4	1.4	3.8	2.1	0.8	4.7	1.4	0.7	4.7	1.3	1.4	2.9	2.1
REC	0	0	0.4	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1	0
REF NO.	Q3011			Q3012			Q3013			Q3014			Q3015		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.6	4.0	1.4	1.3	4.7	1.9	1.1	3.1	1.8	1.7	0	1.1	1.3	4.7	1.9
REC	0	0.1	0	0	0.1	0	0	0.1	0	0.1	0	0	0	0.1	0
REF NO.	Q3016			Q3017			Q3018			Q3022			Q3811		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.5	3.3	1.3	2.7	4.7	3.3	4.8	4.9	5.5	3.5	4.7	4.2	0	4.9	0
REC	0	0.1	0	0	0.1	0.1	0.1	4.9	0	0	0.1	0.1	2.6	4.9	3.2
REF NO.	QR3002			QR3003			QR3004			QR3005			QR3006		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	2.9	0.1	0	1.0	0.1	0	0.2	0.2	4.9	4.8	0	0	0	4.8
REC	0	0.1	0.1	0	1.0	0.1	0	0.2	0.2	4.9	3.4	4.8	0	4.8	0
REF NO.	QR3007			QR3009			QR3010			QR3011			QR3012		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0	4.0	0	5.5	0	0	0	5.0	4.9	0.5	4.9	0	4.9	0
REC	0	0	4.0	0	0	4.8	0	0	5.0	4.9	4.9	0	0	0	4.7
REF NO.	QR3013														
	E	C	B												
PLAY	0	0	4.8												
REC	0	3.2	0												

IC3003 (M52054FP)


32
31
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26
25
24
23
22
21
20
19
18
17
1.5k
1.5k
1k
SW 8
(NVHS &N)
SW 7
(SVHS &N)
DET
DET
Peaking
SW 6 (VSYNC &N)
LOG
SW 5
SVHS
NVHS
Vcc
6 dB
SP
SW 4
EP
10k
GCR3
DET
GCR2
HPF
LIM
NVHS
SVHS
SW 1
PB
Vcc
GND
EP
SW 2
SP
MIXER1
N
SW 3
P
GCA1
DC
AMP
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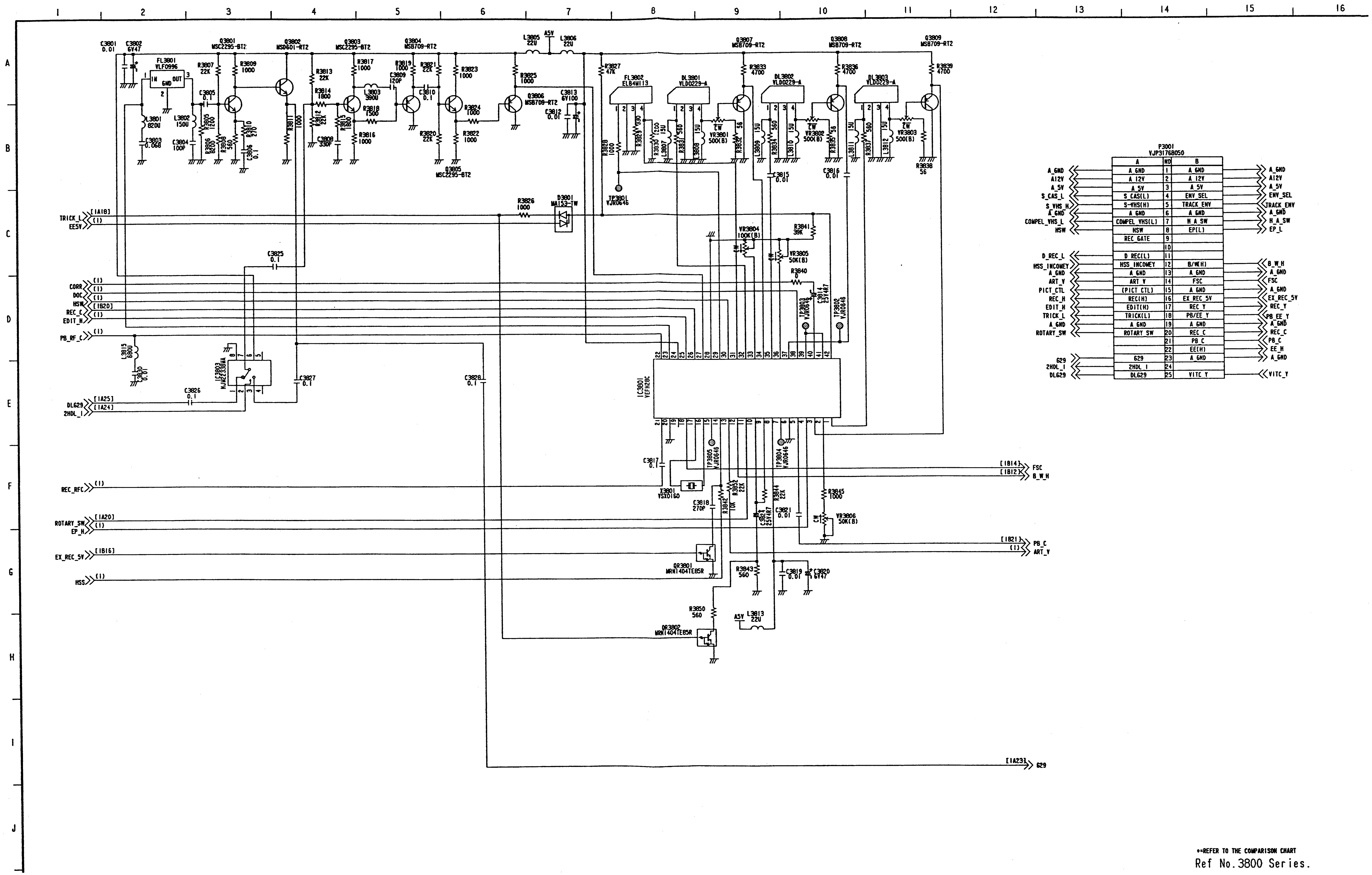
VIDEO (1) SCHEMATIC DIAGRAM (E5: Page CBA-7) 2/2


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J
C3801 0.01
C3802 6V47
FL3801 VLF0996
IN GND OUT
L3801 820U
C3803 0.068
L3802 150U
C3804 100P
C3805 0.1
R3805 1200
R3806 8200
R3807 22K
R3808 560
R3809 1000
R3810 270
C3806 0.1
Q3801 MSC2295-BT2
Q3802 MSD601-RT2
R3811 1000
Q3803 MSC2295-BT2
R3812 22K
R3813 22K
R3814 1800
R3815 1800
C3808 330P
R3816 1000
R3817 1000
L3803 390U
R3818 1500
C3809 120P
Q3804 MSB709-RT2
R3819 1000
R3820 22K
R3821 22K
C3810 0.1
R3822 1000
R3823 1000
R3824 1000
Q3805 MSC2295-BT2
L3805 22U
A5V
L3806 22U
R3825 1000
Q3806 MSB709-RT2
C3812 0.01
C3813 6V100
R3826 1000
D3801 MA153-TW
R3827 47K
R3828 1000
FL3802 ELB4M113
R3829 330
R3830 1200
L3807 15U
DL3801 VLD0229-A
R3831 560
L3808 15U
CW
VR3801 500(B)
R3832 56
Q3807 MSB709-RT2
R3833 4700
L3809 15U
DL3802 VLD0229-A
R3834 560
L3810 15U
VR3802 500(B)
R3835 56
Q3808 MSB709-RT2
R3836 4700
L3811 15U
DL3803 VLD0229-A
R3837 560
L3812 15U
VR3803 500(B)
Q3809 MSB709-RT2
R3839 4700
R3838 56
C3815 0.01
C3816 0.01
TP3801 VJR0646
VR3804 100K(B)
VR3805 50K(B)
R3841 39K
R3840 0
C3814 25V4R7
TP3803 VJR0646
TP3802 VJR0646
IC3801 VEFH28C
C3817 0.1
X3801 VSX0160
TP3805 VJR0646
TP3804 VJR0646
C3818 270P
R3842 10K
R3852 22K
R3844 22K
C3824 25V4R7
C3821 0.01
R3845 1000
VR3806 50K(B)
QR3801 MRN1404TE85R
R3843 560
C3819 0.01
C3820 6V47
R3850 560
A5V L3813 22U
QR3802 MRN1404TE85R
TRICK_L [1A18]
EE5V (1)
C3825 0.1
CORR (1)
DOC (1)
HSW (1)
REC_C [1B20]
EDIT_H (1)
PB_RF_C (1)
L3815 680U
C3830 0.01
IC3803 NJM2233BMA
C3826 0.1
C3827 0.1
C3828 0.1
DL629 [1A25]
2HDL_I [1A24]
REC_RFC (1)
ROTARY_SW [1A20]
EP_H (1)
EX_REC_5V [1B16]
HSS (1)
[1B14] FSC
[1B12] B_W_H
[1B21] PB_C
(1) ART_Y
[1A23] 629
P3001
VJP3176B050
A NO B
A_GND A GND 1 A GND A_GND
A12V A 12V 2 A 12V A12V
A_5V A 5V 3 A 5V A_5V
S_CAS_L S CAS(L) 4 ENV SEL ENV_SEL
S_VHS_H S-VHS(H) 5 TRACK ENV TRACK_ENV
A_GND A GND 6 A GND A_GND
COMPEL_VHS_L COMPEL VHS(L) 7 H A SW H_A_SW
HSW HSW 8 EP(L) EP_L
REC GATE 9
10
D_REC_L D REC(L) 11
HSS_INCOMEY HSS INCOMEY 12 B/W(H) B_W_H
A_GND A GND 13 A GND A_GND
ART_Y ART Y 14 FSC FSC
PICT_CTL (PICT CTL) 15 A GND A_GND
REC_H REC(H) 16 EX REC 5V EX_REC_5V
EDIT_H EDIT(H) 17 REC Y REC_Y
TRICK_L TRICK(L) 18 PB/EE Y PB_EE_Y
A_GND A GND 19 A GND A_GND
ROTARY_SW ROTARY SW 20 REC C REC_C
21 PB C PB_C
22 EE(H) EE_H
629 629 23 A GND A_GND
2HDL_I 2HDL I 24
DL629 DL629 25 VITC Y VITC_Y

*=REFER TO THE COMPARISON CHART

Ref No.3800 Series.

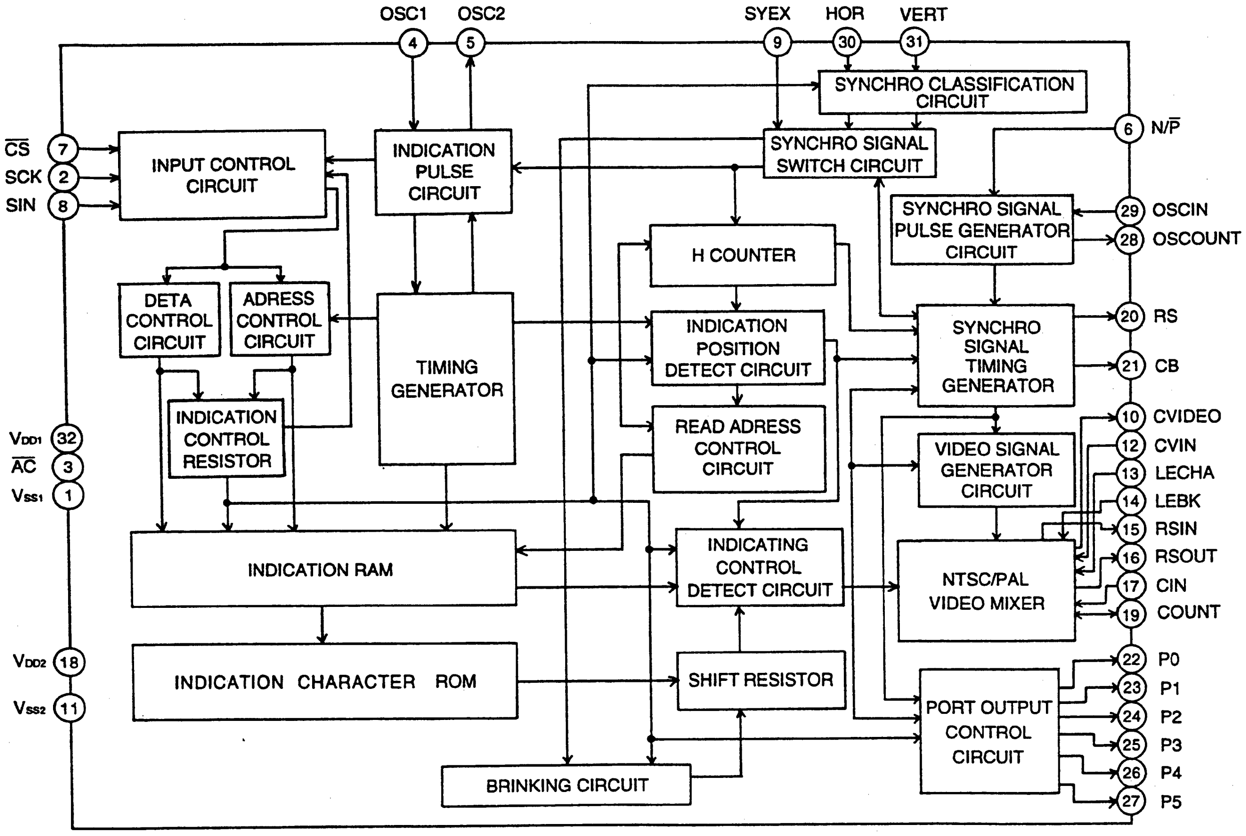
VIDEO 1 ICs DC VOLTAGE CHART (Ref. No 3800 Series)

REF NO.	IC3801															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	3.0	0.5	0	2.0	0	2.3	4.8	3.0	3.0	3.4	0.3	0.8	1.2	3.5	3.8
REC	0	3.2	0.5	0	4.2	0	4.1	4.8	3.0	3.0	4.7	0.3	0.8	1.2	3.5	3.8
REF NO.	IC3801															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	0	1.7	0	0	2.5	2.1	0	4.6	0	1.8	2.1	0	2.1	4.7	0	0
REC	0	1.7	0	0	2.0	0	0	4.6	0	1.8	2.1	0	1.8	4.7	0	0
REF NO.	IC3801															
PIN NO.	33	34	35	36	37	38	39	40	41	42						
PLAY	3.1	0.5	2.4	2.9	3.2	4.8	2.4	1.3	2.4	2.0						
REC	3.4	0.5	4.1	3.2	2.8	1.2	3.9	1.3	3.9	4.3						
REF NO.	IC3803															
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	2.9	3.3	2.9	0	0	4.8	2.1	0								
REC	2.9	3.3	2.9	0	0	4.8	2.1	0								

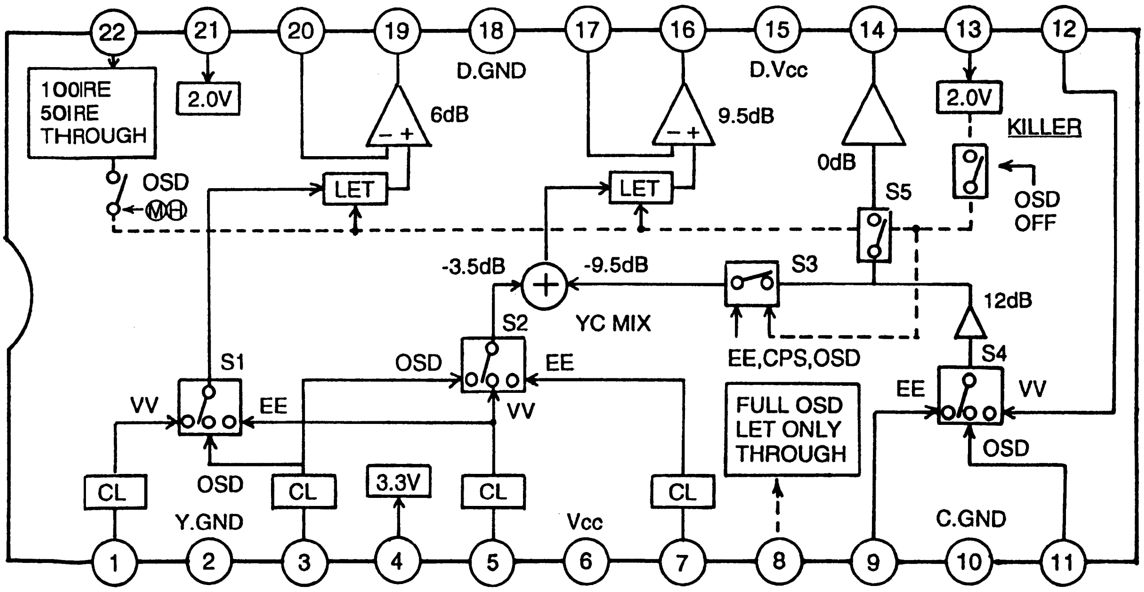
VIDEO 1 TRANSISTORs DC VOLTAGE CHART (Ref. No 3800 Series)

REF NO.	Q3801			Q3802			Q3803			Q3805			Q3806		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.4	3.9	1.2	3.2	4.8	3.9	1.4	3.3	2.2	1.5	3.3	2.2	2.1	0	1.5
REC	0.4	3.9	1.2	3.2	4.8	3.9	1.4	3.3	2.2	1.5	3.3	2.2	2.1	0	1.5
REF NO.	Q3807			Q3808			Q3809			QR3801			QR3802		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.5	0	0	0.5	0	0	0.5	0	0	0	0	4.8	0	0	4.7
REC	0.5	0	0	0.5	0	0	0.5	0	0	0	0.5	0.1	0	0	4.7

IC3301 (M50458-001FP)


OSC1
OSC2
SYEX
HOR
VERT
4
5
9
30
31
SYNCHRO CLASSIFICATION CIRCUIT
6 N/P
CS 7
SCK 2
SIN 8
INPUT CONTROL CIRCUIT
INDICATION PULSE CIRCUIT
SYNCHRO SIGNAL SWITCH CIRCUIT
SYNCHRO SIGNAL PULSE GENERATOR CIRCUIT
29 OSCIN
28 OSCOUNT
H COUNTER
DETA CONTROL CIRCUIT
ADRESS CONTROL CIRCUIT
TIMING GENERATOR
INDICATION POSITION DETECT CIRCUIT
SYNCHRO SIGNAL TIMING GENERATOR
20 RS
21 CB
INDICATION CONTROL RESISTOR
READ ADRESS CONTROL CIRCUIT
VDD1 32
AC 3
VSS1 1
10 CVIDEO
VIDEO SIGNAL GENERATOR CIRCUIT
12 CVIN
13 LECHA
14 LEBK
15 RSIN
INDICATION RAM
INDICATING CONTROL DETECT CIRCUIT
NTSC/PAL VIDEO MIXER
16 RSOUT
17 CIN
19 COUNT
VDD2 18
INDICATION CHARACTER ROM
SHIFT RESISTOR
22 P0
23 P1
VSS2 11
PORT OUTPUT CONTROL CIRCUIT
24 P2
25 P3
BRINKING CIRCUIT
26 P4
27 P5

IC3305 (AN3581N)


22
21
20
19
18
17
16
15
14
13
12
D.GND
D.Vcc
100IRE
50IRE
THROUGH
2.0V
6dB
9.5dB
2.0V
KILLER
0dB
OSD
MH
LET
LET
S5
OSD OFF
-3.5dB
-9.5dB
S3
YC MIX
12dB
S2
S1
OSD
EE
EE,CPS,OSD
S4
VV
EE
VV
FULL OSD LET ONLY THROUGH
EE
VV
OSD
OSD
CL
CL
3.3V
CL
CL
Y.GND
Vcc
C.GND
1
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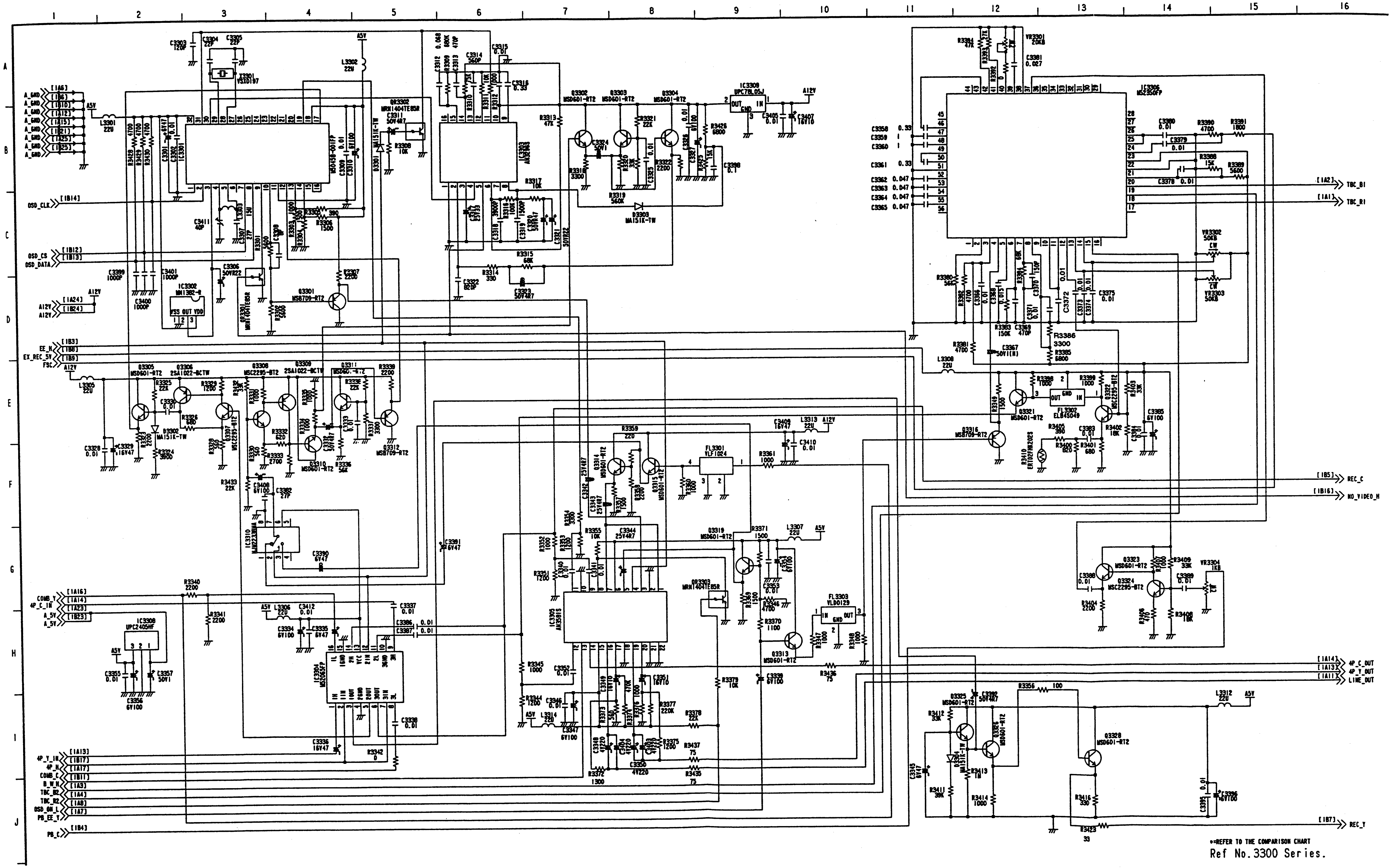
11

VIDEO (2) SCHEMATIC DIAGRAM (E6:Page CBA-8)



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11
12
13
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15
16
A
B
C
D
E
F
G
H
I
J
A_GND
A5V
L3301 22U
OSD_CLK
OSD_CS
OSD_DATA
A12V
EE_H
EX_REC_5V
FSC
COMB_Y
4P_C_IN
A_5V
4P_Y_IN
4P_H
COMB_C
B_W_H
TBC_B2
TBC_R2
OSD_ON_L
PB_EE_Y
PB_C
IC3302
IC3303
IC3304
IC3305
IC3306
IC3308
IC3309
IC3310
X3301
FL3301
FL3302
FL3303
TBC_BI
TBC_RI
REC_C
NO_VIDEO_H
4P_C_OUT
4P_Y_OUT
LINE_OUT
REC_Y
VR3301
VR3302
VR3303
VR3304

*=REFER TO THE COMPARISON CHART

Ref No.3300 Series.

VIDEO 2 ICs DC VOLTAGE CHART

REF NO.	IC3301															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	4.7	0	2.2	2.1	4.8	0	0.1	4.8	2.6	0	0	0	2.3	1.9	1.9
REC	0	4.7	0	2.2	2.1	4.8	4.1	0.1	4.8	2.6	0	2.6	3.4	2.3	1.9	1.9
REF NO.	IC3301															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	0	0	1.7	0.3	0.3	0	0	0	0	0	0	2.2	2.2	3.4	4.8	4.9
REC	1.8	4.9	1.7	0.7	0.7	0	0	0	0	0	0	2.2	2.2	3.4	4.8	4.9
REF NO.	IC3302															
PIN NO.	1	2	3													
PLAY	0	4.9	4.9													
REC	0	4.9	4.9													
REF NO.	IC3303															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	3.3	4.1	3.4	0.1	2.9	0	2.9	2.2	5.0	4.8	0.6	0	1.3	3.7	4.1
REC	0	3.3	4.1	3.4	0.1	2.9	0	2.9	2.2	5.0	4.8	0.6	0	1.3	3.7	4.1
REF NO.	IC3304															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	1.9	0	1.9	0	1.9	1.8	0	1.9	1.9	0	1.9	0	4.9	1.9	0	1.9
REC	1.9	0	1.9	0	1.9	1.8	0	1.9	1.9	0	1.9	4.7	4.9	1.9	0	1.9
REF NO.	IC3305															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	2.3	0	2.4	0	2.3	4.8	2.3	0	1.9	0	1.9	1.9	0.3	2.3	4.9	2.2
REC	2.3	0	2.4	4.7	2.3	4.8	2.3	0	1.9	0	1.9	1.9	0.3	2.3	4.9	2.2
REF NO.	IC3305															
PIN NO.	17	18	19	20	21	22										
PLAY	1.5	0	2.0	1.6	0	0										
REC	1.5	0	2.0	1.6	0	0										
REF NO.	IC3306															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	2.4	2.3	2.6	2.0	2.5	2.8	0	1.7	2.0	2.0	1.5	1.0	1.2	2.6	0
REC	0	0	0	0.3	0.1	0	0	0	0.1	0	0	0	0	0	0.1	0
REF NO.	IC3306															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	0	1.7	2.7	1.8	3.3	0	4.6	2.6	2.3	2.2	0	0	0	0	0	0
REC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.	IC3306															
PIN NO.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
PLAY	0	0	0	0	2.7	0	2.6	2.4	2.4	2.5	2.0	0	0	3.3	1.9	1.9
REC	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0
REF NO.	IC3306															
PIN NO.	49	50	51	52	53	54	55	56								
PLAY	2.0	3.3	0	2.9	2.9	0	2.9	0								
REC	0	0	0	0	0	0	0	0								
REF NO.	IC3308			IC3309			IC3310									
PIN NO.	1	2	3	1	2	3	1	2	3	4	5	6	7	8		
PLAY	5.7	0	4.9	11.9	5.0	0	2.9	0	2.9	0	0	4.9	2.1	0		
REC	5.7	0	4.9	11.9	5.0	0	2.9	4.7	2.9	0	0	4.9	2.1	0		

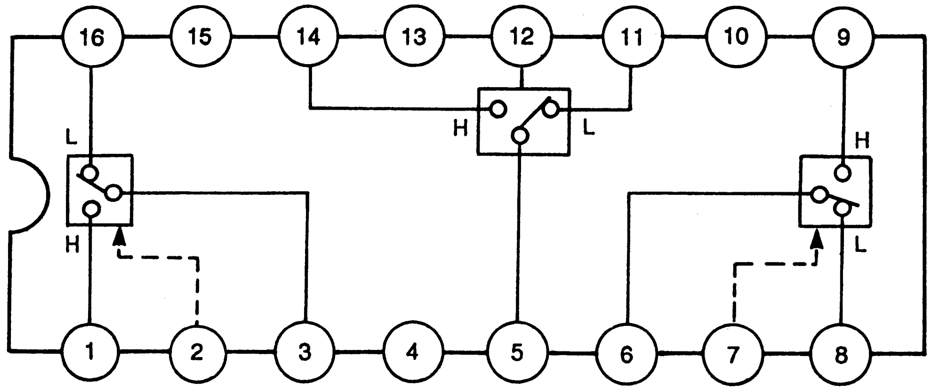
VIDEO 2 TRANSTORs DC VOLTAGE CHART

REF NO.	Q3301			Q3302			Q3303			Q3304			Q3305		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	1.9	0	1.3	2.9	5.0	3.5	2.9	5.0	3.0	2.3	5.0	2.9	1.7	11.8	2.2
REC	1.9	0	1.3	2.9	5.0	3.5	2.9	5.0	3.0	2.3	5.0	2.9	1.7	11.8	2.2
REF NO.	Q3306			Q3307			Q3308			Q3309			Q3310		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	11.8	2.4	11.1	1.2	11.1	1.9	3.8	11.1	4.5	11.8	7.7	11.1	7.0	11.8	7.7
REC	11.8	2.4	11.1	1.2	11.1	1.9	3.8	11.1	4.5	11.8	7.7	11.1	7.0	11.8	7.7

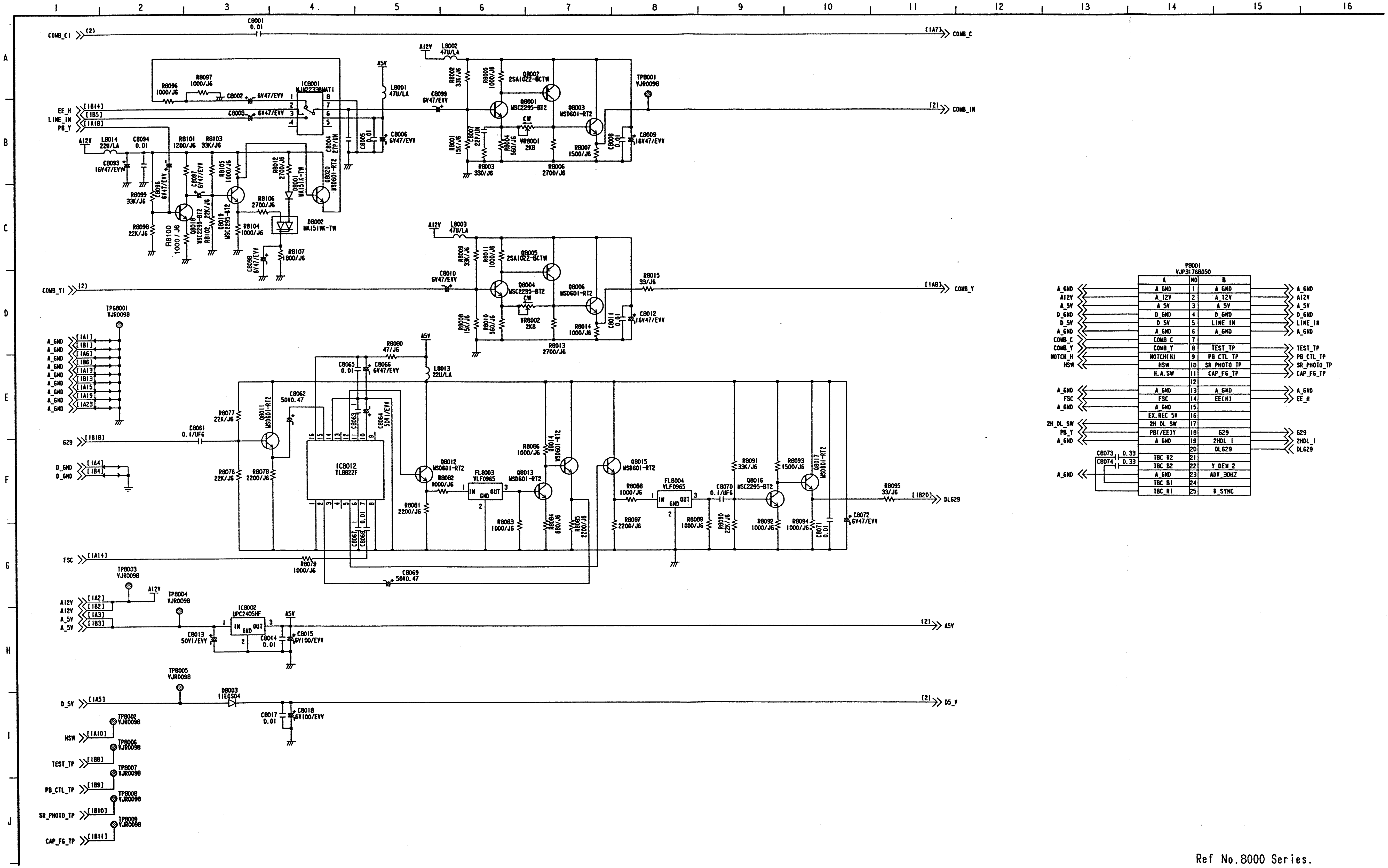
VIDEO 2 TRANSISTORs DC VOLTAGE CHART

REF NO.	Q3311			Q3312			Q3313			Q3314			Q3315		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	1.9	11.8	1.5	2.6	0	1.9	3.0	4.8	3.6	1.5	11.9	2.1	2.3	11.9	2.9
REC	1.9	11.8	1.5	2.6	0	1.9	3.0	4.8	3.6	1.5	11.9	2.1	2.3	11.9	2.9
REF NO.	Q3316			Q3319			Q3321			Q3322			Q3323		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	2.1	0	1.5	3.0	4.8	3.7	4.0	4.6	4.6	0.7	3.5	1.4	2.5	4.6	3.0
REC	0.1	0	1.5	3.0	4.8	3.7	0	0.1	0.1	0	0.1	0	0	0.1	0.1
REF NO.	Q3324			Q3325			Q3326			Q3328					
	E	C	B	E	C	B	E	C	B	E	C	B			
PLAY	0.6	3.0	1.4	2.7	4.9	2.8	2.1	4.9	2.7	1.4	4.9	2.1			
REC	0	0.1	0	2.7	4.9	2.8	2.1	4.9	2.7	1.4	4.9	2.1			
REF NO.	QR3301			QR3302			QR3303								
	E	C	B	E	C	B	E	C	B						
PLAY	0	4.8	0.1	0	4.8	0	0	0	2.9						
REC	0	4.8	0.1	0	4.8	0	0	0	2.9						

IC3304 (M52065FP)



VIDEO (3) SCHEMATIC DIAGRAM (E7: Page CBA-9) 1/2


1
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11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
COMB_CI
C8001 0.01
[1A7] COMB_C
A12V L8002 47U/LA
A5Y
IC8001 NJM2233BMATI
R8096 1000/J6
R8097 1000/J6
C8002 6V47/EVY
C8003 6V47/EVY
EE_H [1B14]
LINE_IN [1B5]
PB_Y [1A18]
L8001 47U/LA
C8099 6V47/EVY
Q8002 2SA1022-BCTW
Q8001 MSC2295-BT2
Q8003 MSD601-RT2
TP8001 VJR0098
(2) COMB_IN
VR8001 2K8
R8003 330/J6
R8006 2700/J6
R8007 1500/J6
C8009 16V47/EVY
A12V L8014 22U/LA
C8094 0.01
C8093 16V47/EVY
R8101 1200/J6
R8103 33K/J6
Q8020 MSD601-RT2
D8001 MA151K-TW
D8002 MA151WK-TW
R8106 2700/J6
R8104 1000/J6
R8107 1800/J6
R8099 33K/J6
R8098 22K/J6
R8100 1000/J6
A12V L8003 47U/LA
C8010 6V47/EVY
Q8005 2SA1022-BCTW
Q8004 MSC2295-BT2
Q8006 MSD601-RT2
VR8002 2K8
R8015 33/J6
COMB_YI (2)
[1A8] COMB_Y
R8013 2700/J6
R8014 1000/J6
C8012 16V47/EVY
TP68001 VJR0098
A_GND [1A1]
A_GND [1B1]
A_GND [1A6]
A_GND [1B6]
A_GND [1A13]
A_GND [1B13]
A_GND [1A15]
A_GND [1A19]
A_GND [1A23]
R8080 47/J6
C8065 0.01
C8066 6V47/EVY
L8013 22U/LA
C8062 50V0.47
R8077 22K/J6
Q8011 MSD601-RT2
629 [1B18]
C8061 0.1/UF6
IC8012 TL0822F
D_GND [1A4]
D_GND [1B4]
R8076 22K/J6
R8078 2200/J6
Q8012 MSD601-RT2
R8082 1000/J6
FL8003 YLF0965
Q8013 MSD601-RT2
Q8014 MSD601-RT2
R8086 1000/J6
R8081 2200/J6
R8083 1000/J6
R8084 680/J6
R8085 2200/J6
Q8015 MSD601-RT2
R8088 1000/J6
FL8004 YLF0965
R8087 2200/J6
C8070 0.1/UF6
R8089 1000/J6
R8090 22K/J6
R8091 33K/J6
Q8016 MSC2295-BT2
R8092 1000/J6
R8093 1500/J6
Q8017 MSD601-RT2
R8094 1000/J6
R8095 33/J6
[1B20] DL629
C8072 6V47/EVY
FSC [1A14]
R8079 1000/J6
C8069 50V0.47
TP8003 VJR0098
A12V
TP8004 VJR0098
A12V [1A2]
A12V [1B2]
A_5V [1A3]
A_5V [1B3]
IC8002 UPC2405HF
A5V
C8013 50V1/EVY
C8014 0.01
C8015 6V100/EVY
(2) A5V
TP8005 VJR0098
D8003 1EQS04
D_5V [1A5]
C8017 0.01
C8018 6V100/EVY
(2) D5_V
TP8002 VJR0098
HSW [1A10]
TP8006 VJR0098
TEST_TP [1B8]
TP8007 VJR0098
PB_CTL_TP [1B9]
TP8008 VJR0098
SR_PHOTO_TP [1B10]
TP8009 VJR0098
CAP_F6_TP [1B11]
P8001
VJP31768050
C8073 0.33
C8074 0.33

A	NO	B
A GND	1	A GND
A 12V	2	A 12V
A 5V	3	A 5V
D GND	4	D GND
D 5V	5	LINE IN
A GND	6	A GND
COMB C	7	
COMB Y	8	TEST TP
NOTCH(H)	9	PB CTL TP
HSW	10	SR PHOTO TP
H.A.SW	11	CAP F6 TP
	12	
A GND	13	A GND
FSC	14	EE(H)
A GND	15	
EX.REC 5V	16	
2H DL SW	17	
PB(/EE)Y	18	629
A GND	19	2HDL I
	20	DL629
TBC R2	21	
TBC B2	22	Y DEM 2
A GND	23	ADV 30HZ
TBC B1	24	
TBC R1	25	R SYNC

Ref No.8000 Series.

VIDEO 3 ICs DC VOLTAGE (Ref No. 8000 Series)

REF NO.	IC8001								IC8002							
PIN NO.	1	2	3	4	5	6	7	8	1	2	3					
PLAY	2.9	0	2.9	0	0	4.9	2.2	0	5.7	0	4.9					
REC	2.9	4.7	2.9	0	0	4.9	2.2	0	5.7	0	4.9					
REF NO.	IC8012															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	2.0	0	0	2.8	1.3	2.3	0	0	9.5	1.3	2.8	0	0	2.0	4.5
REC	0	2.0	0	0	2.8	1.3	2.3	0	0	9.5	1.3	2.8	0	0	2.0	4.5

VIDEO 3 TRANSISTORs DC VOLTAGE (Ref No. 8000 Series)

REF NO.	Q8001			Q8002			Q8003			Q8004			Q8005		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	2.9	11.1	3.6	11.8	6.7	11.1	6.1	11.8	6.7	2.9	11.1	3.6	11.8	6.8	11.1
REC	2.9	11.1	3.6	11.8	6.7	11.1	6.1	11.8	6.7	2.9	11.1	3.6	11.8	6.8	11.1
REF NO.	Q8006			Q8011			Q8012			Q8013			Q8014		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	6.1	11.8	6.8	1.7	4.9	2.4	2.1	4.9	2.8	8.4	4.2	1.0	3.5	4.9	4.2
REC	6.1	11.8	6.8	1.7	4.9	2.4	2.1	4.9	2.8	8.4	4.2	1.0	3.5	4.9	4.2
REF NO.	Q8015			Q8016			Q8017			Q8018			Q8019		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	2.2	4.9	2.8	1.0	3.3	1.8	2.6	4.9	3.3	3.5	7.6	4.2	3.5	8.3	4.2
REC	2.2	4.9	2.8	1.0	3.3	1.8	2.6	4.9	3.3	3.5	7.6	4.2	3.5	8.3	4.2
REF NO.	Q8020														
	E	C	B												
PLAY	7.7	11.9	8.3												
REC	7.7	11.9	8.3												

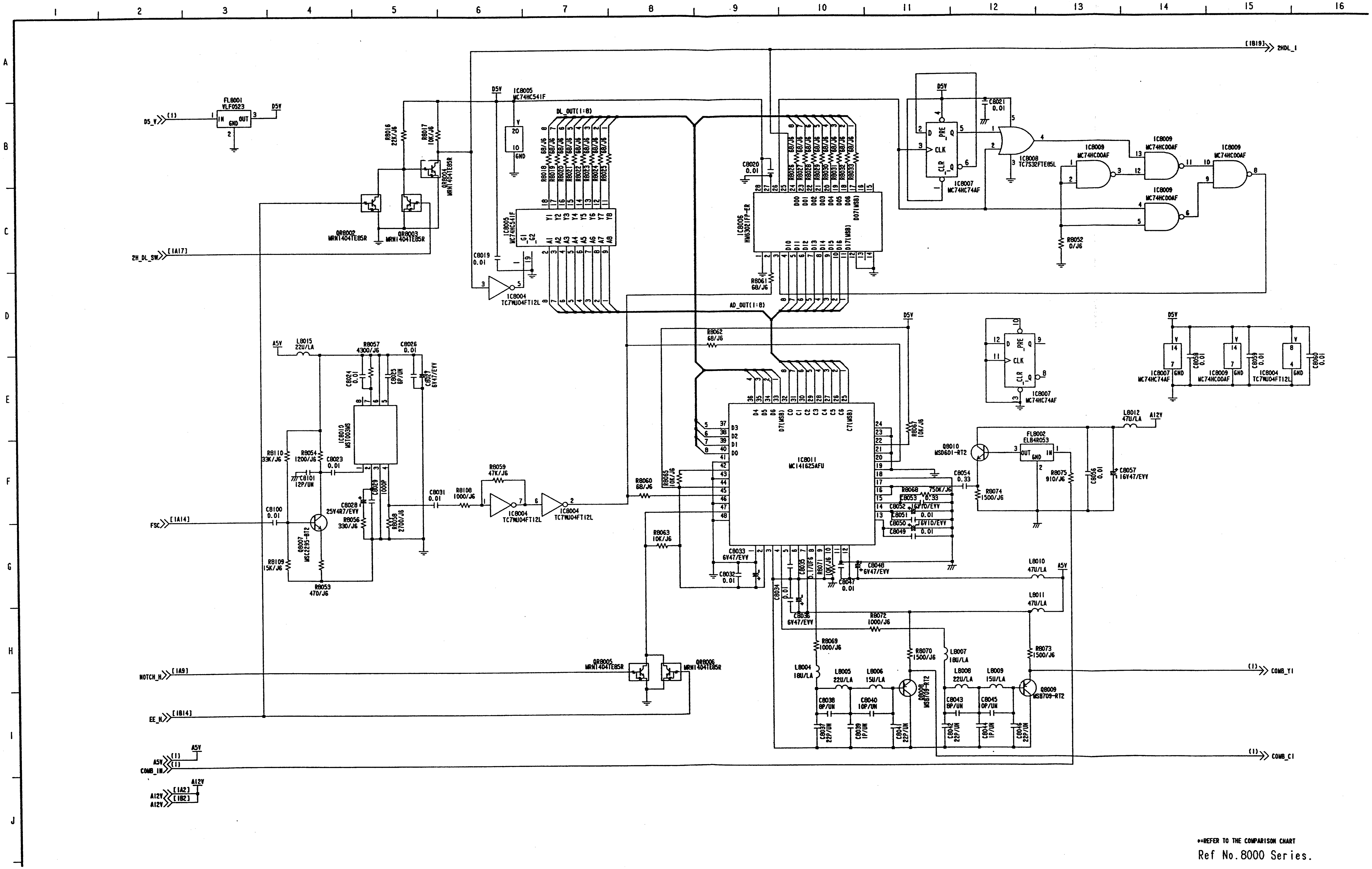
VIDEO 3 ICs DC VOLTAGE (Ref No. 8000 Series)

REF NO.	IC8004															
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	2.4	2.3	3.3	0	0.1	2.4	2.4	4.8								
REC	2.4	2.3	3.3	0	0.1	2.4	2.4	4.8								
REF NO.	IC8005															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0.1	1.5	2.2	2.1	2.2	2.6	2.2	2.2	2.3	0	2.4	2.2	2.4	2.5	2.0	2.1
REC	0.1	1.8	2.6	1.9	2.0	2.8	2.2	1.7	2.6	0	2.4	2.3	2.4	2.7	2.1	1.8
REF NO.	IC8005															
PIN NO.	17	18	19	20												
PLAY	2.2	1.5	0	4.8												
REC	2.7	1.8	0	4.8												
REF NO.	IC8006															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	2.3	4.8	2.3	0	2.2	2.5	2.3	2.0	2.2	1.5	0	4.3	0	4.5	4.5
REC	0	2.3	4.8	2.6	1.7	0	2.7	2.0	1.8	2.6	1.8	0	4.3	0	4.5	4.5
REF NO.	IC8006															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28				
PLAY	1.5	2.2	2.1	2.3	2.6	2.3	2.3	2.3	3.3	4.4	0	4.8				
REC	1.8	2.7	1.7	1.7	2.1	2.3	1.8	0	3.3	4.3	0	4.8				
REF NO.	IC8007															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
PLAY	4.8	2.4	4.4	4.8	2.4	2.4	0	4.8	4.8	0	0	0	0	4.8		
REC	4.8	2.4	4.4	4.8	2.4	2.4	0	4.8	4.8	0	0	0	0	4.8		
REF NO.	IC8008															
PIN NO.	1	2	3	4	5											
PLAY	2.4	4.5	0	4.8	4.8											
REC	2.4	4.3	0	4.8	4.8											
REF NO.	IC8009															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
PLAY	0	0	4.8	4.4	0	4.8	0	4.8	4.8	0	0	4.8	4.8	4.8		
REC	0	0	4.8	4.4	0	4.8	0	4.8	4.8	0	0	4.8	4.8	4.8		
REF NO.	IC8010															
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	2.5	2.0	0	2.6	3.1	4.8	0	0								
REC	2.5	2.0	0	2.6	3.1	4.8	5.4	0								
REF NO.	IC8011															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	4.9	0	0.8	1.4	0	4.8	0.7	0	1.1	0	4.8	4.4	0	2.9	0
REC	0	4.8	0	0	1.4	0	0	0.8	0	1.1	0	4.8	4.4	1.4	2.8	2.9
REF NO.	IC8011															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	2.6	0	0	2.3	0	0	0	0	1.5	2.2	2.1	2.2	2.7	2.2	2.2	2.2
REC	2.9	0	0	2.3	0	4.8	0	0	1.8	2.6	1.7	2.0	2.7	2.2	1.7	0
REF NO.	IC8011															
PIN NO.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
PLAY	1.5	2.3	2.1	2.2	2.7	2.2	2.3	2.3	0	4.8	0	4.8	2.3	0	4.8	0
REC	1.9	0	1.6	2.0	2.8	2.2	1.8	2.7	0	4.8	0	4.8	2.3	0	0	0

VIDEO 3 TRANSISTORs DC VOLTAGE (Ref No. 8000 Series)

REF NO.	Q8007			Q8008			Q8009			Q8010					
	E	C	B	E	C	B	E	C	B	E	C	B			
PLAY	1.0	2.2	1.8	1.4	0	0.7	1.4	0	0.8	5.5	11.9	0.1			
REC	1.0	2.2	1.8	1.4	0	0.7	1.4	0	0.8	5.5	11.9	0.1			
REF NO.	QR8002			QR8003			QR8004			QR8005			QR8006		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0	0	0	0	4.8	0	3.3	0	0	4.8	0	0	4.8	0
REC	0	0	4.7	0	0	4.8	0	3.3	0	0	0	0	0	0	4.7

VIDEO (3) SCHEMATIC DIAGRAM (E7:Page CBA-9) 2/2



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YLF0523
D5_V
D5V
2H_DL_SW
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R8016
22K/J6
R8017
10K/J6
QR8004
MRN1404TE85R
QR8002
MRN1404TE85R
QR8003
MRN1404TE85R
IC8005
MC74HC541F
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IC8004
TC7WU04FT12L
IC8006
HM63021FP-ER
C8020
0.01
R8061
68/J6
AD_OUT(1:8)
R8062
68/J6
IC8007
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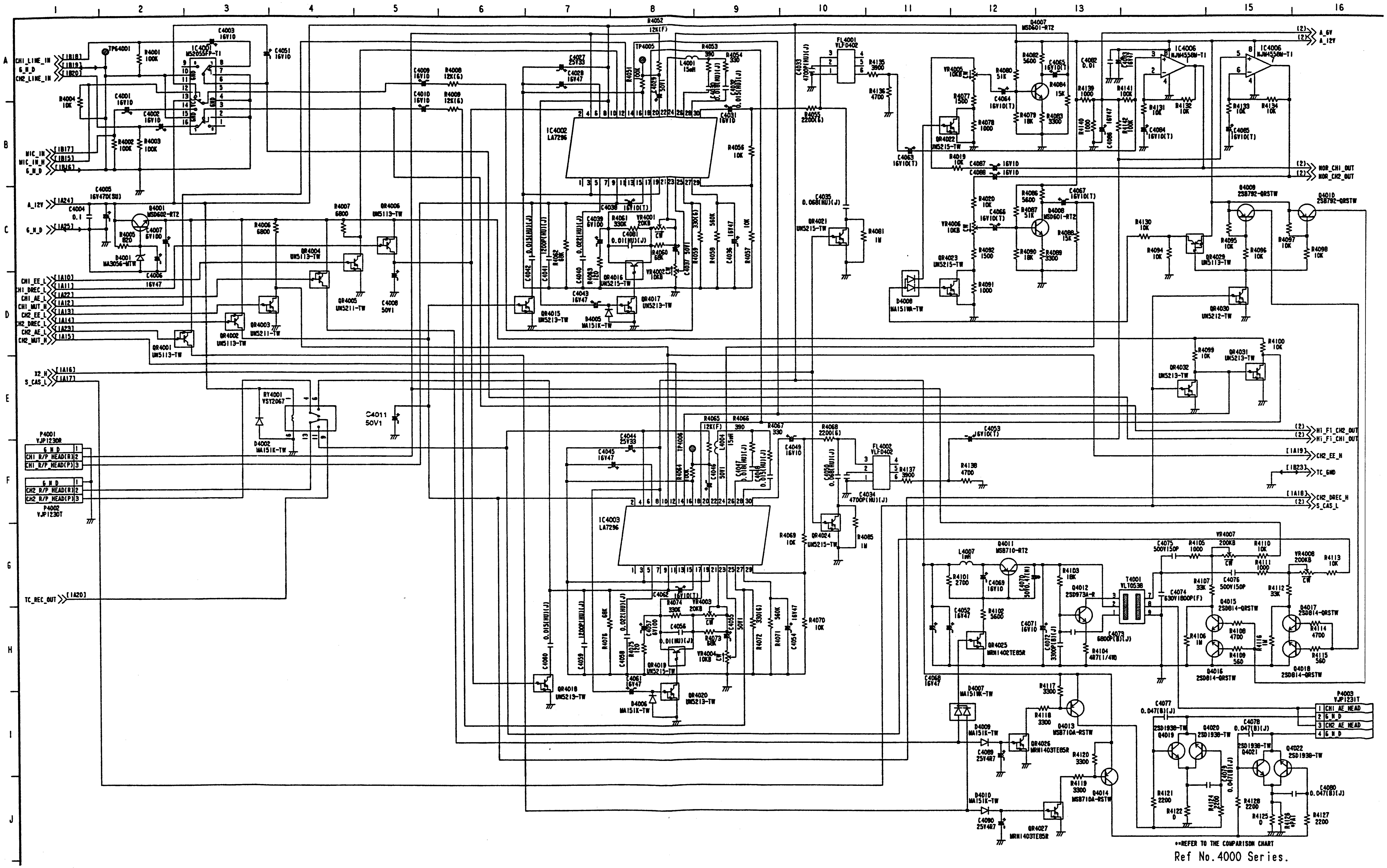
C8021
0.01
IC8008
TC7S32FTE85L
IC8009
MC74HC00AF
R8052
0/J6
[1B19]
2HDL_I
A5V
L8015
22U/LA
R8057
4300/J6
C8026
0.01
C8024
0.01
C8025
6P/UN
C8027
6V47/EVY
IC8010
MST003H5
R8110
33K/J6
R8054
1200/J6
C8023
0.01
C8101
12P/UN
C8029
1000P
C8028
25V4R7/EVY
R8056
330/J6
R8058
2700/J6
C8100
0.01
FSC
[1A14]
Q8007
MSC2295-BT2
R8109
15K/J6
R8053
470/J6
R8059
47K/J6
C8031
0.01
R8108
1000/J6
R8060
68/J6
R8065
10K/J6
R8063
10K/J6
IC8011
MC141625AFU
R8067
10K/J6
Q8010
MSD601-RT2
FL8002
ELB4R053
C8054
0.33
R8074
1500/J6
R8075
910/J6
C8056
0.01
C8057
16V47/EVY
L8012
47U/LA
A12V
R8068
750K/J6
C8053
0.33
C8052
16V10/EVY
C8051
0.01
C8050
16V10/EVY
C8049
0.01
C8033
6V47/EVY
C8032
0.01
C8034
0.01
C8035
0.1/UF6
R8071
10K/J6
C8048
6V47/EVY
C8047
0.01
C8036
6V47/EVY
R8072
1000/J6
L8010
47U/LA
L8011
47U/LA
R8069
1000/J6
R8070
1500/J6
R8073
1500/J6
L8004
18U/LA
L8005
22U/LA
L8006
15U/LA
L8007
18U/LA
L8008
22U/LA
L8009
15U/LA
Q8008
MSB709-RT2
Q8009
MSB709-RT2
C8038
8P/UN
C8040
10P/UN
C8043
8P/UN
C8045
10P/UN
C8037
22P/UN
C8039
1P/UN
C8041
22P/UN
C8042
22P/UN
C8044
1P/UN
C8046
22P/UN
COMB_YI
COMB_CI
QR8005
MRN1404TE85R
QR8006
MRN1404TE85R
NOTCH_H
[1A9]
EE_H
[1B14]
A5V
COMB_IN
A12V
[1A2]
[1B2]
C8058
0.01
C8059
0.01
C8060
0.01

*=REFER TO THE COMPARISON CHART

Ref No.8000 Series.

AUDIO 1 SCHEMATIC DIAGRAM (E8: Page CBA-6)


CH1_LINE_IN
G_N_D
CH2_LINE_IN
MIC_IN
MIC_IN_N
A_12V
CH1_EE_L
CH1_DREC_L
CH1_AE_L
CH1_MUT_H
CH2_EE_L
CH2_DREC_L
CH2_AE_L
CH2_MUT_H
X2_H
S_CAS_L
P4001 YJP1230R
CH1_R/P_HEAD(R)
CH1_R/P_HEAD(P)
CH2_R/P_HEAD(R)
CH2_R/P_HEAD(P)
P4002 YJP1230T
TC_REC_OUT
IC4001 M52055FP-T1
IC4002 LA7296
IC4003 LA7296
IC4006 NJM4558M-T1
FL4001 VLF0402
FL4002 VLF0402
RY4001 VS12067
T4001 VLT0538
A_6V
A_12V
NOR_CH1_OUT
NOR_CH2_OUT
Hi_F1_CH2_OUT
Hi_F1_CH1_OUT
CH2_EE_H
TC_GND
CH2_DREC_H
S_CAS_L
P4003 YJP1231T
CH1_AE_HEAD
CH2_AE_HEAD

**REFER TO THE COMPARISON CHART

Ref No.4000 Series.

AUDIO 1 ICs DC VOLTAGE CHART

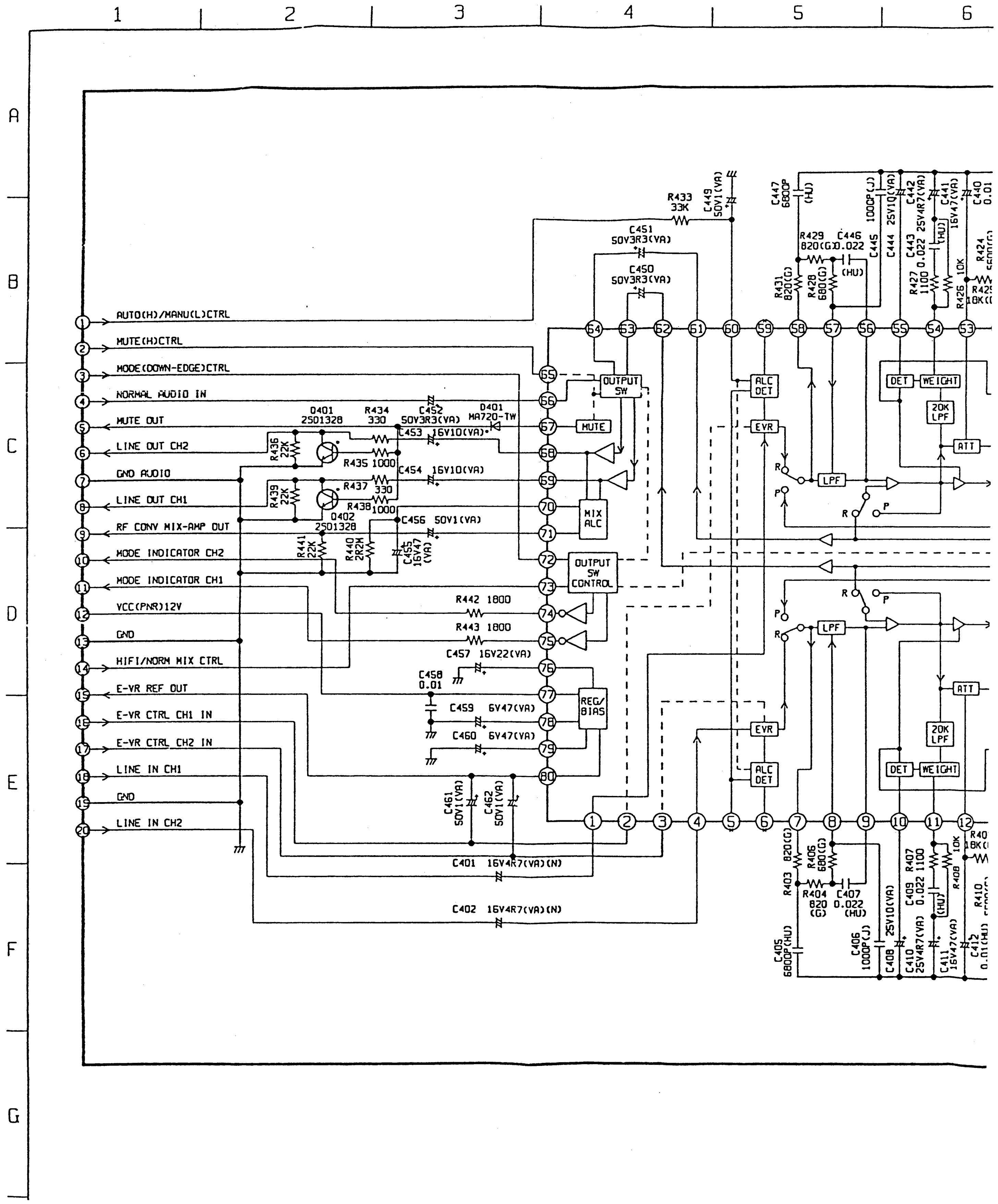
REF NO.	IC4001															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	5.8	0	4.4	0	4.4	4.4	0	5.8	5.8	0	5.8	0	11.9	5.8	0	5.8
REC	5.8	0	4.4	0	4.4	4.4	0	5.8	5.8	0	5.8	0	11.9	5.8	0	5.8
REF NO.	IC4002															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0.1	0	0	0	7.9	9.0	0	11.9	0	0	0	0	0	0	2.1	0
REC	1.4	4.9	0	0	7.9	9.0	0	11.9	0	4.7	0	0	0	0	2.1	0
REF NO.	IC4002															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
PLAY	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0.2	0	0	4.0		
REC	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0	0	0	4.0		
REF NO.	IC4003															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0.2	0	0	0	7.9	8.9	0	11.9	0	0	0	0	0	0	2.1	0
REC	11.4	14.9	0	0	7.9	8.9	0	11.9	0	4.7	0	0	0	0	2.1	0
REF NO.	IC4003															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
PLAY	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0.2	0	0	4.2		
REC	2.2	4.0	0	3.8	2.2	1.2	0	0	0	0	0	0	0	4.2		

AUDIO 1 TRANSISTORs DC VOLTAGE CHART

REF NO.	Q4001			Q4007			Q4009			Q4010			Q4011		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	5.0	11.9	5.6	2.4	7.7	3.0	11.9	11.6	11.1	11.9	11.6	11.1	11.9	0.1	11.9
REC	5.0	11.9	5.6	2.4	7.7	3.0	11.9	11.6	11.1	11.9	11.6	11.1	11.6	0	10.9
REF NO.	Q4013			Q4014			Q4015			Q4016			Q4017		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	11.9	0	11.9	11.9	0	11.9	0	0	0.6	0	0	0.7	0	0	0.6
REC	11.9	11.8	11.2	11.9	11.8	11.2	0	0	0.6	0	0	0.7	0	0	0.6
REF NO.	Q4018			Q4019			Q4020			Q4021			Q4022		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0
REC	0	0	0.7	0	0	0.7	0	0	0.7	0	0	0.6	0	0	0.6
REF NO.	QR4001			QR4002			QR4003			QR4004			QR4005		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	5.0	0	4.9	5.0	0	4.9	0	0	4.8	5.0	0	4.9	0	0	4.8
REC	5.0	5.0	0	5.0	5.0	0	0	4.7	0	5.0	5.0	0	0	4.7	0
REF NO.	QR4006			QR4015			QR4016			QR4017			QR4018		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	5.0	0	4.9	0	0	0	2.2	2.2	0.1	0	0.1	0	0	0	0
REC	5.0	5.0	0	0	0	4.9	2.2	2.2	0	0	0	0	0	0	5.0
REF NO.	QR4019			QR4020			QR4021			QR4024			QR4025		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	2.2	0	0.1	0	0.1	0	0	0	0	0	0	0	0	11.9	0
REC	2.2	2.2	0	0	0	0	0	0	0	0	0	0	0	0	4.5
REF NO.	QR4026			QR4027			QR4028			QR4029			QR4030		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0	11.9	0	0	11.9	0	11.9	0	11.8	11.9	11.8	0	0	0	5.0
REC	0	0	4.5	0	0	4.5	11.9	0	11.8	11.9	11.8	0	0	0	5.0
REF NO.	QR4031			QR4032											
	E	C	B	E	C	B									
PLAY	0	4.0	0	0	0	5.0									
REC	0	4.0	0	0	0	5.0									

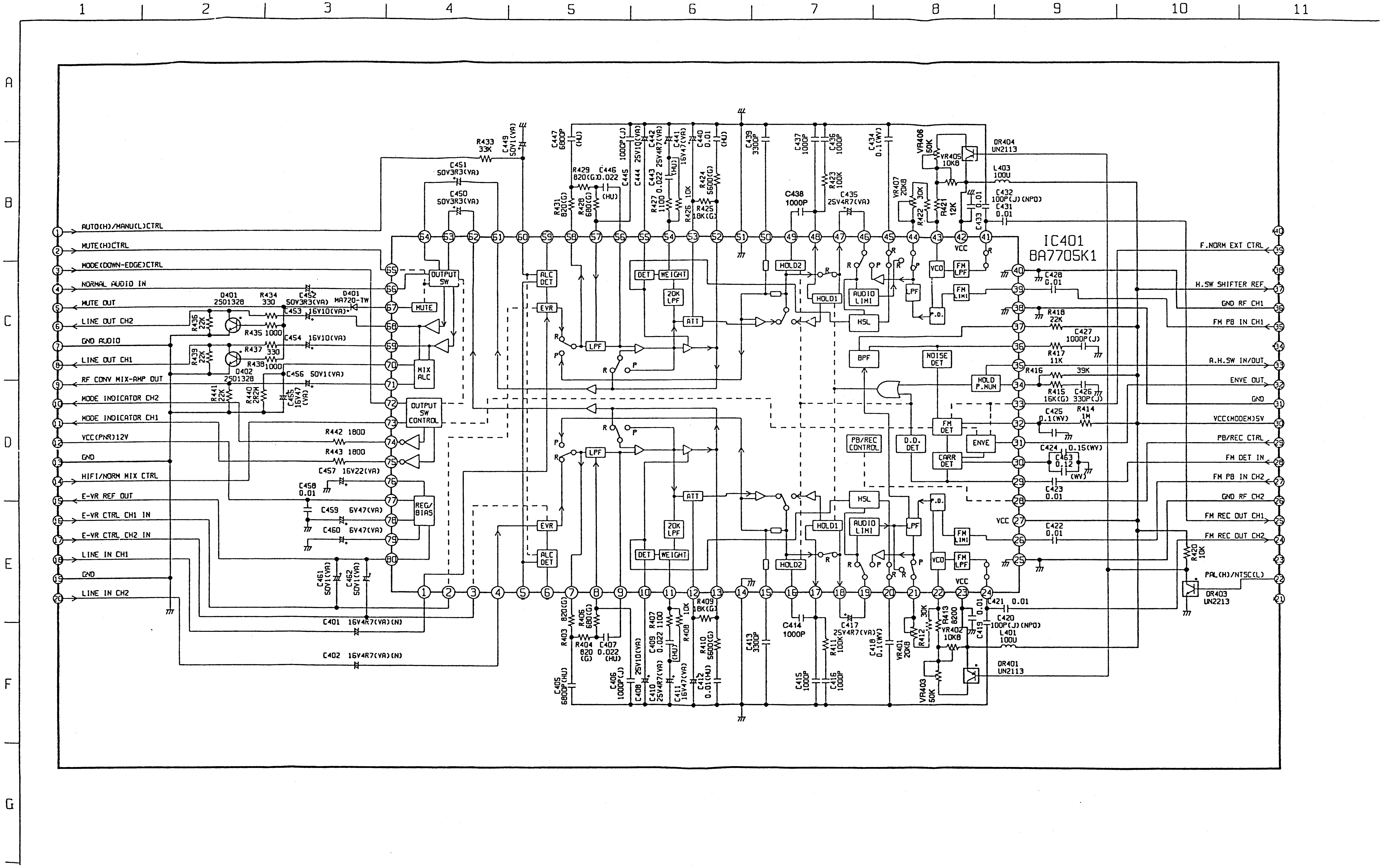
FM AUDIO PACK SCHEMATIC DIAGRAM (E8-1: Page CBA-10)

IC4505 (VEP04353B)


1
2
3
4
5
6
A
B
C
D
E
F
G
AUTO(H)/MANU(L)CTRL
MUTE(H)CTRL
MODE(DOWN-EDGE)CTRL
NORMAL AUDIO IN
MUTE OUT
LINE OUT CH2
GND AUDIO
LINE OUT CH1
RF CONV MIX-AMP OUT
MODE INDICATOR CH2
MODE INDICATOR CH1
VCC(PNR)12V
GND
HIFI/NORM MIX CTRL
E-VR REF OUT
E-VR CTRL CH1 IN
E-VR CTRL CH2 IN
LINE IN CH1
GND
LINE IN CH2
Q401 2SD1328
Q402 2SD1328
D401 MA720-TW
R434 330
R435 1000
R436 22K
R437 330
R438 1000
R439 22K
R440 2R2K
R441 22K
R442 1800
R443 1800
C452 50V3R3(VA)
C453 16V10(VA)
C454 16V10(VA)
C455 16V47 (VA)
C456 50V1(VA)
C457 16V22(VA)
C458 0.01
C459 6V47(VA)
C460 6V47(VA)
C461 50V1(VA)
C462 50V1(VA)
C401 16V4R7(VA)(N)
C402 16V4R7(VA)(N)
R433 33K
C449 50V1(VA)
C451 50V3R3(VA)
C450 50V3R3(VA)
C447 6800P (HU)
C445 1000P(J)
C444 25V10(VA)
C442 25V4R7(VA)
C441 16V47(VA)
C440 0.01
R429 820(G)
C446 0.022 (HU)
R431 820(G)
R428 680(G)
C443 0.022 (HU)
R427 1100
R426 10K
R424
R425 18K
OUTPUT SW
MUTE
MIX ALC
OUTPUT SW CONTROL
REG/ BIAS
ALC DET
EVR
LPF
DET
WEIGHT
20K LPF
ATT
R
P
R403 820(G)
R406 680(G)
R404 820 (G)
C407 0.022 (HU)
C405 6800P(HU)
C406 1000P(J)
C408 25V10(VA)
C409 0.022 (HU)
R407 1100
R408 10K
C410 25V4R7(VA)
C411 16V47(VA)
C412 0.01(HU)
R410
R409 18K
1 2 3 4 5 6 7 8 9 10 11 12
53 54 55 56 57 58 59 60 61 62 63 64
65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

FM AUDIO PACK SCHEMATIC DIAGRAM (E8-1: Page CBA-10)

IC4505 (VEP04353B)


1
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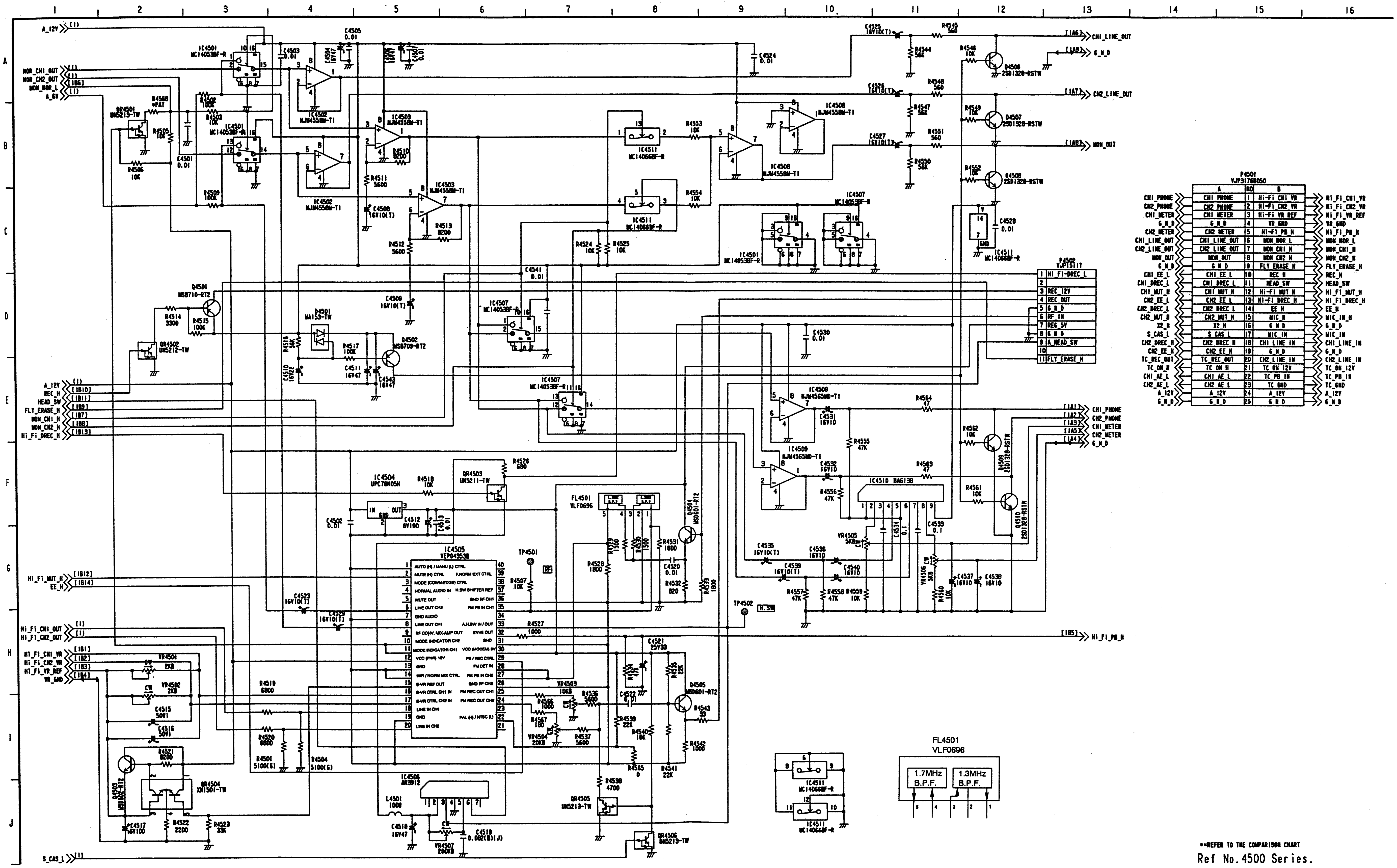
10
11
A
B
C
D
E
F
G
IC401
BA7705K1
AUTO(H)/MANU(L)CTRL
MUTE(H)CTRL
MODE(DOWN-EDGE)CTRL
NORMAL AUDIO IN
MUTE OUT
LINE OUT CH2
GND AUDIO
LINE OUT CH1
RF CONV MIX-AMP OUT
MODE INDICATOR CH2
MODE INDICATOR CH1
VCC(PNR)12V
GND
HIFI/NORM MIX CTRL
E-VR REF OUT
E-VR CTRL CH1 IN
E-VR CTRL CH2 IN
LINE IN CH1
GND
LINE IN CH2
F.NORM EXT CTRL
H.SW SHIFTER REF
GND RF CH1
FM PB IN CH1
A.H.SW IN/OUT
ENVE OUT
GND
VCC(MODEM)5V
PB/REC CTRL
FM DET IN
FM PB IN CH2
GND RF CH2
FM REC OUT CH1
FM REC OUT CH2
PAL(H)/NTSC(L)
Q401 2SD1328
Q402 2SD1328
D401 MA720-TW
R434 330
R435 1000
R436 22K
R437 330
R438 1000
R439 22K
R440 2R2M
R441 22K
R442 1800
R443 1800
C452 50V3R3(VA)
C453 16V10(VA)
C454 16V10(VA)
C455 16V47 (VA)
C456 50V1(VA)
C457 16V22(VA)
C458 0.01
C459 6V47(VA)
C460 6V47(VA)
C461 50V1(VA)
C462 50V1(VA)
C401 16V4R7(VA)(N)
C402 16V4R7(VA)(N)
R433 33K
C449 50V1(VA)
C451 50V3R3(VA)
C450 50V3R3(VA)
C447 6800P (HJ)
R429 820(G)
C446 0.022 (HJ)
R431 820(G)
R428 680(G)
C445 1000P(J)
C444 25V10(VA)
C443 0.022
C442 25V4R7(VA)
R427 1100
C441 16V47(VA)
(HJ)
R426 10K
R424 5600(G)
R425 18K(G)
C440 0.01 (HJ)
C439 3300P
C438 1000P
C437 1000P
C436 1000P
R423 100K
C435 25V4R7(VA)
C434 0.1(WV)
VR406 50K
VR407 20KB
VR405 10KB
30K
R422
R421 12K
C433 0.01
QR404 UN2113
L403 100U
C432 100P(J)(NPO)
C431 0.01
VCC
C428 0.01
R418 22K
C427 1000P(J)
R417 11K
R416 39K
R415 16K(G)
C426 330P(J)
C425 0.1(WV)
R414 1M
C424 0.15(WV)
C463 0.12 (WV)
C423 0.01
VCC
C422 0.01
R420 10K
QR403 UN2213
C421 0.01
C420 100P(J)(NPO)
C419 0.01
L401 100U
VR402 10KB
R413 8200
R412
30K
VR401 20KB
VR403 50K
QR401 UN2113
C418 0.1(WV)
C417 25V4R7(VA)
R411 100K
C416 1000P
C415 1000P
C414 1000P
C413 3300P
R409 18K(G)
R410 5600(G)
R408 10K
C412 0.01(HJ)
C411 16V47(VA)
(HJ)
C410 25V4R7(VA)
C409 0.022
R407 1100
C408 25V10(VA)
C406 1000P(J)
R404 820 (G)
C407 0.022 (HJ)
R403 820(G)
R406 680(G)
C405 6800P(HJ)
OUTPUT SW
MUTE
MIX ALC
OUTPUT SW CONTROL
REG/ BIAS
ALC DET
EVR
LPF
DET
WEIGHT
20K LPF
ATT
HOLD2
HOLD1
AUDIO LIMI
HSL
BPF
NOISE DET
VCO
FM LPF
FM LIMI
LPF
P.D.
HOLD P.MUN
FM DET
ENVE
CARR DET
PB/REC CONTROL
D.O. DET
R
P

AUDIO 2 SCHEMATIC DIAGRAM (E8: Page CBA-6)


1
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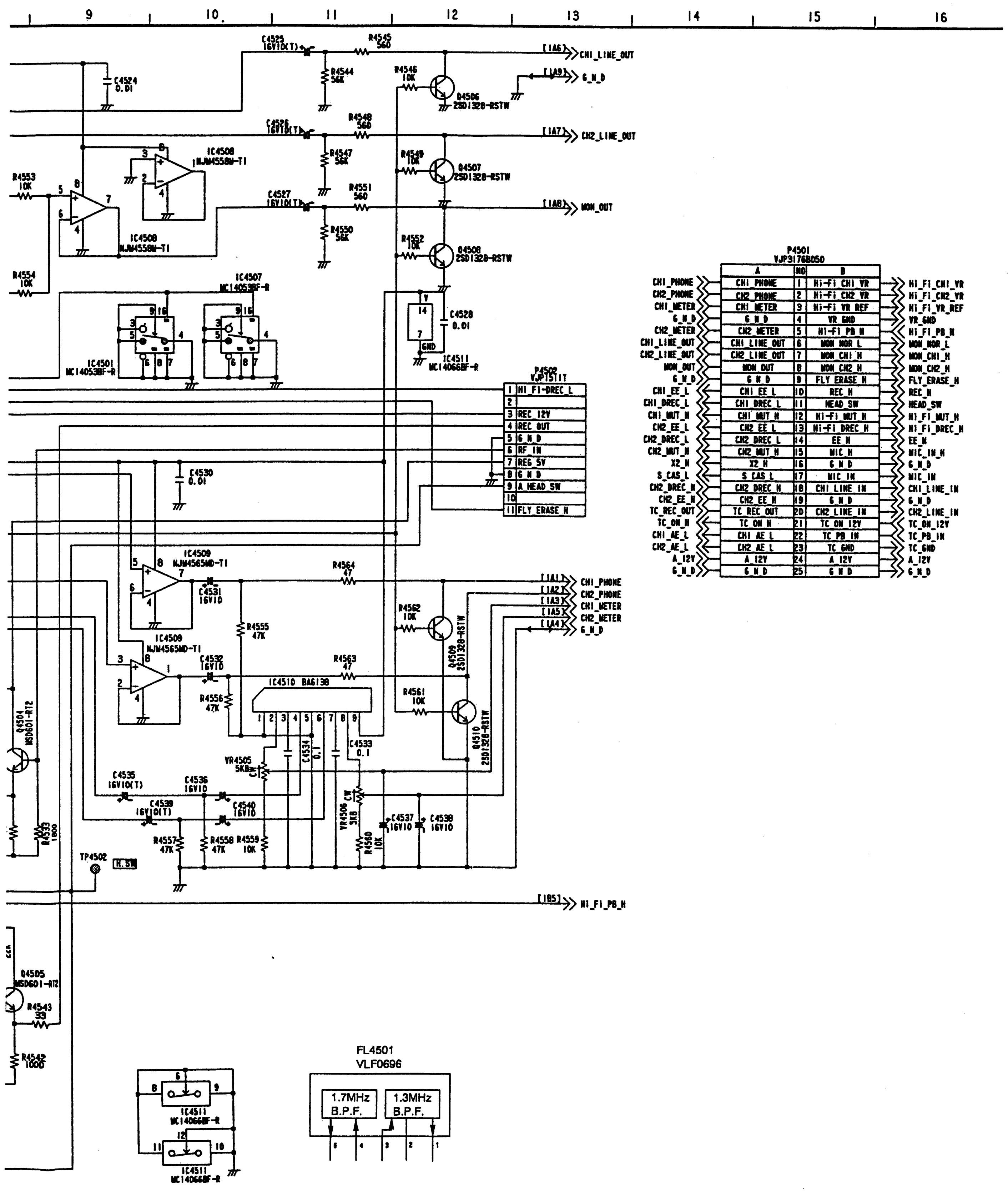
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
A_12V
MOR_CH1_OUT
MOR_CH2_OUT
MON_MOR_L
A_6V
IC4501 MC14053BF-R
IC4502 NJM4558M-T1
IC4503 NJM4558M-T1
IC4504 UPC78M05H
IC4505 VEP04353B
IC4506 AK3912
IC4507 MC14053BF-R
IC4508 NJM4558M-T1
IC4509 NJM4565MD-T1
IC4510 BA6138
IC4511 MC14066BF-R
Q4501 MSB710-RT2
Q4502 MSB709-RT2
Q4503 MSD602-RT2
Q4504 MSD601-RT2
Q4505 MSD601-RT2
Q4506 2SD1328-RSTW
Q4507 2SD1328-RSTW
Q4508 2SD1328-RSTW
Q4509 2SD1328-RSTW
Q4510 2SD1328-RSTW
QR4501 UN5213-TW
QR4502 UN5212-TW
QR4503 UN5211-TW
QR4504 XN1501-TW
QR4505 UN5213-TW
QR4506 UN5213-TW
D4501 MA153-TW
FL4501 VLF0696
L4501 100U
TP4501
TP4502
VR4501 2KB
VR4502 2KB
VR4503 10KB
VR4504 20KB
VR4505 5KB
VR4506 5KB
VR4507 200KB
CH1_LINE_OUT
G_N_D
CH2_LINE_OUT
MON_OUT
CH1_PHONE
CH2_PHONE
CH1_METER
CH2_METER
HI_FI_PB_H
A_12V
REC_H
HEAD_SW
FLY_ERASE_H
MON_CH1_H
MON_CH2_H
Hi_Fi_DREC_H
HI_FI_MUT_H
EE_H
Hi_Fi_CH1_OUT
Hi_Fi_CH2_OUT
HI_F1_CH1_VR
HI_F1_CH2_VR
HI_F1_VR_REF
VR_GND
S_CAS_L
P4502 VJP1511T
1 HI_FI-DREC_L
2
3 REC_12V
4 REC_OUT
5 G_N_D
6 RF_IN
7 REG_5V
8 G_N_D
9 A_HEAD_SW
10
11 FLY_ERASE_H
P4501 VJP3176B050
A | NO | B
CH1_PHONE | CH1 PHONE | 1 | Hi-Fi CH1 VR | Hi_F1_CH1_VR
CH2_PHONE | CH2 PHONE | 2 | Hi-Fi CH2 VR | Hi_Fi_CH2_VR
CH1_METER | CH1 METER | 3 | Hi-Fi VR REF | Hi_Fi_VR_REF
G_N_D | G N D | 4 | VR GND | VR_GND
CH2_METER | CH2 METER | 5 | Hi-Fi PB H | Hi_Fi_PB_H
CH1_LINE_OUT | CH1 LINE OUT | 6 | MON MOR L | MON_MOR_L
CH2_LINE_OUT | CH2 LINE OUT | 7 | MON CH1 H | MON_CH1_H
MON_OUT | MON OUT | 8 | MON CH2 H | MON_CH2_H
G_N_D | G N D | 9 | FLY ERASE H | FLY_ERASE_H
CH1_EE_L | CH1 EE L | 10 | REC H | REC_H
CH1_DREC_L | CH1 DREC L | 11 | HEAD SW | HEAD_SW
CH1_MUT_H | CH1 MUT H | 12 | Hi-Fi MUT H | HI_FI_MUT_H
CH2_EE_L | CH2 EE L | 13 | Hi-Fi DREC H | HI_FI_DREC_H
CH2_DREC_L | CH2 DREC L | 14 | EE H | EE_H
CH2_MUT_H | CH2 MUT H | 15 | MIC H | MIC_IN_H
X2_H | X2 H | 16 | G N D | G_N_D
S_CAS_L | S CAS L | 17 | MIC IN | MIC_IN
CH2_DREC_H | CH2 DREC H | 18 | CH1 LINE IN | CH1_LINE_IN
CH2_EE_H | CH2 EE H | 19 | G N D | G_N_D
TC_REC_OUT | TC REC OUT | 20 | CH2 LINE IN | CH2_LINE_IN
TC_ON_H | TC ON H | 21 | TC ON 12V | TC_ON_12V
CH1_AE_L | CH1 AE L | 22 | TC PB IN | TC_PB_IN
CH2_AE_L | CH2 AE L | 23 | TC GND | TC_GND
A_12V | A 12V | 24 | A 12V | A_12V
G_N_D | G N D | 25 | G N D | G_N_D
FL4501
VLF0696
1.7MHz B.P.F.
1.3MHz B.P.F.

*=REFER TO THE COMPARISON CHART

Ref No.4500 Series.


9
10
11
12
13
14
15
16
C4525 16V10(T)
R4545 560
[1A6] CH1_LINE_OUT
C4524 0.01
R4544 56K
R4546 10K
Q4506 2SD1328-RSTW
[1A9] G_N_D
C4526 16V10(T)
R4548 560
[1A7] CH2_LINE_OUT
IC4508 NJM4558M-T1
R4547 56K
R4549 10K
Q4507 2SD1328-RSTW
R4553 10K
C4527 16V10(T)
R4551 560
[1A8] MON_OUT
R4550 56K
R4552 10K
Q4508 2SD1328-RSTW
R4554 10K
IC4507 MC14053BF-R
IC4501 MC14053BF-R
C4528 0.01
IC4511 MC14066BF-R
P4502 VJP1511T
1 HI_FI-DREC_L
2
3 REC 12V
4 REC OUT
5 G N D
6 RF IN
7 REG 5V
8 G N D
9 A HEAD SW
10
11 FLY ERASE H
P4501 VJP3176B050
A
NO
B
CH1 PHONE 1 Hi-Fi CH1 VR
CH2 PHONE 2 Hi-Fi CH2 VR
CH1 METER 3 Hi-Fi VR REF
G N D 4 VR GND
CH2 METER 5 Hi-Fi PB H
CH1 LINE OUT 6 MON NOR L
CH2 LINE OUT 7 MON CH1 H
MON OUT 8 MON CH2 H
G N D 9 FLY ERASE H
CH1 EE L 10 REC H
CH1 DREC L 11 HEAD SW
CH1 MUT H 12 Hi-Fi MUT H
CH2 EE L 13 Hi-Fi DREC H
CH2 DREC L 14 EE H
CH2 MUT H 15 MIC H
X2 H 16 G N D
S CAS L 17 MIC IN
CH2 DREC H 18 CH1 LINE IN
CH2 EE H 19 G N D
TC REC OUT 20 CH2 LINE IN
TC ON H 21 TC ON 12V
CH1 AE L 22 TC PB IN
CH2 AE L 23 TC GND
A 12V 24 A 12V
G N D 25 G N D
CH1_PHONE
CH2_PHONE
CH1_METER
G_N_D
CH2_METER
CH1_LINE_OUT
CH2_LINE_OUT
MON_OUT
CH1_EE_L
CH1_DREC_L
CH1_MUT_H
CH2_EE_L
CH2_DREC_L
CH2_MUT_H
X2_H
S_CAS_L
CH2_DREC_H
CH2_EE_H
TC_REC_OUT
TC_ON_H
CH1_AE_L
CH2_AE_L
A_12V
HI_FI_CH1_VR
HI_FI_CH2_VR
HI_FI_VR_REF
VR_GND
HI_FI_PB_H
MON_NOR_L
MON_CH1_H
MON_CH2_H
FLY_ERASE_H
REC_H
HEAD_SW
HI_FI_MUT_H
HI_FI_DREC_H
EE_H
MIC_IN_H
MIC_IN
CH1_LINE_IN
CH2_LINE_IN
TC_ON_12V
TC_PB_IN
TC_GND
C4530 0.01
IC4509 NJM4565MD-T1
C4531 16V10
R4564 47
[1A1] CH1_PHONE
[1A2] CH2_PHONE
[1A3] CH1_METER
[1A5] CH2_METER
[1A4] G_N_D
R4562 10K
Q4509 2SD1328-RSTW
R4555 47K
C4532 16V10
R4563 47
IC4510 BA6138
R4556 47K
R4561 10K
Q4510 2SD1328-RSTW
Q4504 MSD601-RT2
C4534 0.1
C4533 0.1
VR4505 5KB
C4535 16V10(T)
C4536 16V10
C4539 16V10(T)
C4540 16V10
VR4506 5KB
C4537 16V10
C4538 16V10
R4533 1800
R4557 47K
R4558 47K
R4559 10K
R4560 10K
TP4502
H.SW
[1B5] HI_FI_PB_H
Q4505 MSD601-RT2
R4543 33
R4542 1000
FL4501
VLF0696
1.7MHz B.P.F.
1.3MHz B.P.F.
IC4511 MC14066BF-R
-TW

**REFER TO THE COMPARISON CHART

Ref No.4500 Series.

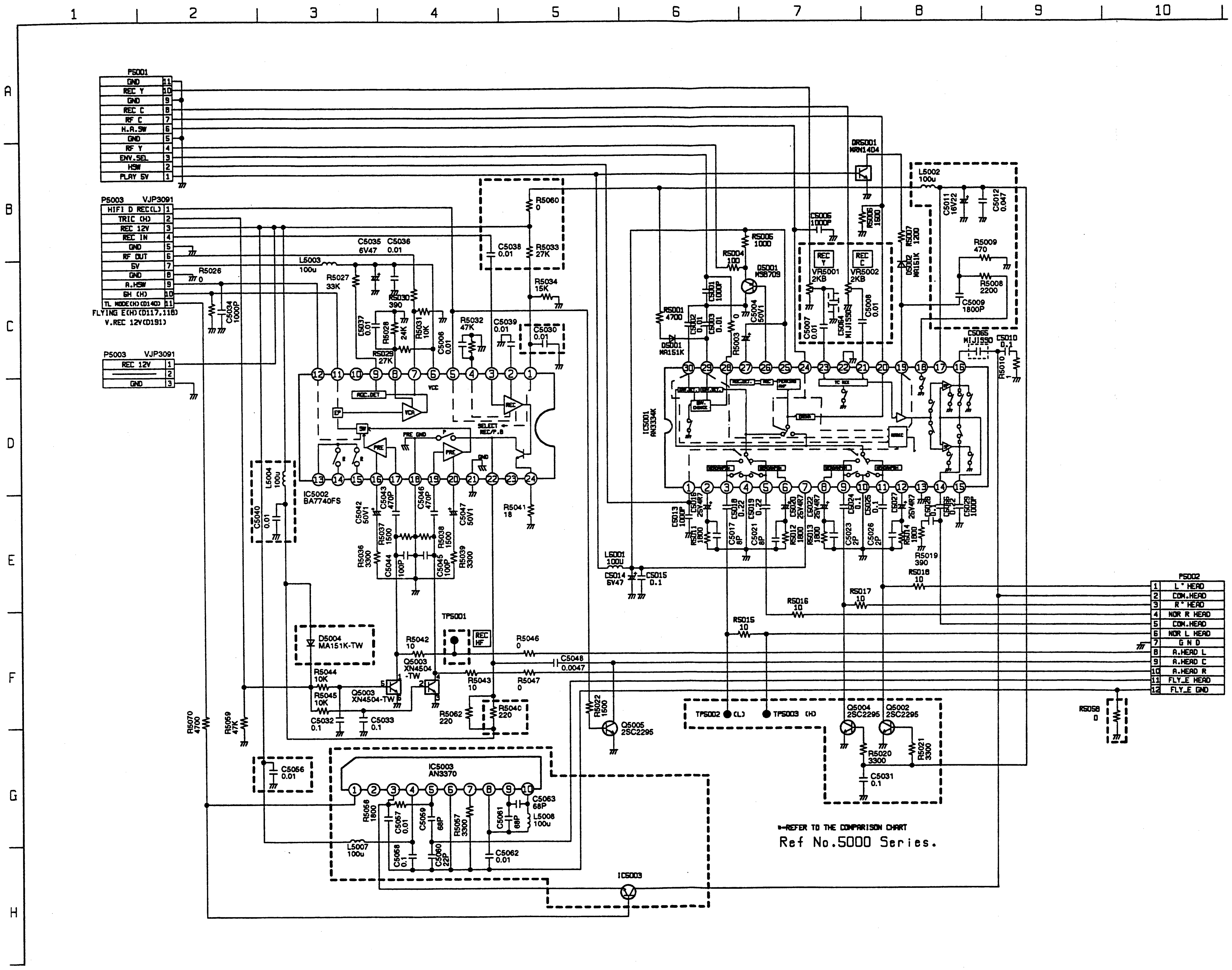
AUDIO 2 ICs DC VOLTAGE

REF NO.	IC4501															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	5.8	5.9	0	0	0	0	0	0	0	0	0	5.9	5.9	5.9	5.9	11.9
REC	5.8	5.9	0	0	0	0	0	0	0	0	0	5.9	5.9	5.9	5.9	11.9
REF NO.	IC4502															
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9								
REC	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9								
REF NO.	IC4503								IC4504							
PIN NO.	1	2	3	4	5	6	7	8	1	2	3					
PLAY	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9	11.9	0	4.9					
REC	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9	11.9	0	4.9					
REF NO.	IC4505															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	0	0	5.3	5.3	1.2	0	0	0	0	1.7	1.7	11.9	0	0	4.8	4.8
REC	0	0	5.3	0	0.2	0	0	0	0	1.7	1.7	11.9	0	0	4.8	4.4
REF NO.	IC4505															
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
PLAY	4.5	1.8	0	1.8	0	0	0	0	0	0	0	0	0	4.9	0	3.5
REC	4.5	1.8	0	1.8	0	0	0	0	0	0	0	0	4.7	4.9	0	0
REF NO.	IC4505															
PIN NO.	33	34	35	36	37	38	39	40								
PLAY	0	0	0	0	4.9	0	0	0								
REC	4.9	0	0	0	4.9	0	0	0								
REF NO.	IC4506															
PIN NO.	1	2	3	4	5	6	7									
PLAY	0	4.9	4.9	0	0.7	4.8	0									
REC	0	4.9	4.9	0	0.7	4.8	0									
REF NO.	IC4507															
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PLAY	5.9	5.9	0	0	0	0	0	0	0	11.9	11.9	5.9	5.9	5.9	5.9	11.9
REC	5.9	5.9	0	0	0	0	0	0	0	11.9	11.9	5.9	5.9	5.9	5.9	11.9
REF NO.	IC4508															
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	11.4	11.4	0	0	5.9	5.9	5.9	11.9								
REC	11.4	11.4	0	0	5.9	5.9	5.9	11.9								
REF NO.	IC4509															
PIN NO.	1	2	3	4	5	6	7	8								
PLAY	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9								
REC	5.9	5.9	5.9	0	5.9	5.9	5.9	11.9								
REF NO.	IC4510															
PIN NO.	1	2	3	4	5	6	7	8	9							
PLAY	0	1.6	2.2	1.9	0	1.9	2.3	1.7	11.9							
REC	0	0	0.6	1.9	0	1.9	0.6	0	11.9							

AUDIO 2 TRANSISTORs DC VOLTAGE

REF NO.	Q4501			Q4502			Q4503			Q4504			Q4505		
	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	11.9	0	11.8	11.5	0.2	11.7	4.8	11.9	5.4	1.3	4.9	1.9	1.8	4.9	2.4
REC	11.9	11.7	11.1	11.3	0	11.7	4.8	11.9	5.4	2.4	4.9	3.0	1.8	4.9	2.4
REF NO.	Q4507			Q4508			Q4509			Q4510					
	E	C	B	E	C	B	E	C	B	E	C	B			
PLAY	0	0	0.3	0	0	0.3	0	0	0.2	0	0	0.2			
REC	0	0	0	0	0	0	0	0	0	0	0	0			
REF NO.	QR4502			QR4503			QR4504								
	E	C	B	E	C	B	1	2	3	4	5				
PLAY	0	11.8	0	0	3.6	0	11.9	5.4	4.8	4.2	4.8				
REC	0	0	4.8	0	3.6	0	11.9	5.4	4.8	4.2	4.8				
REF NO.	QR4505			QR4506											
	E	C	B	E	C	B									
PLAY	0	0	0	0	0	5.0									
REC	0	0	0	0	0	5.0									

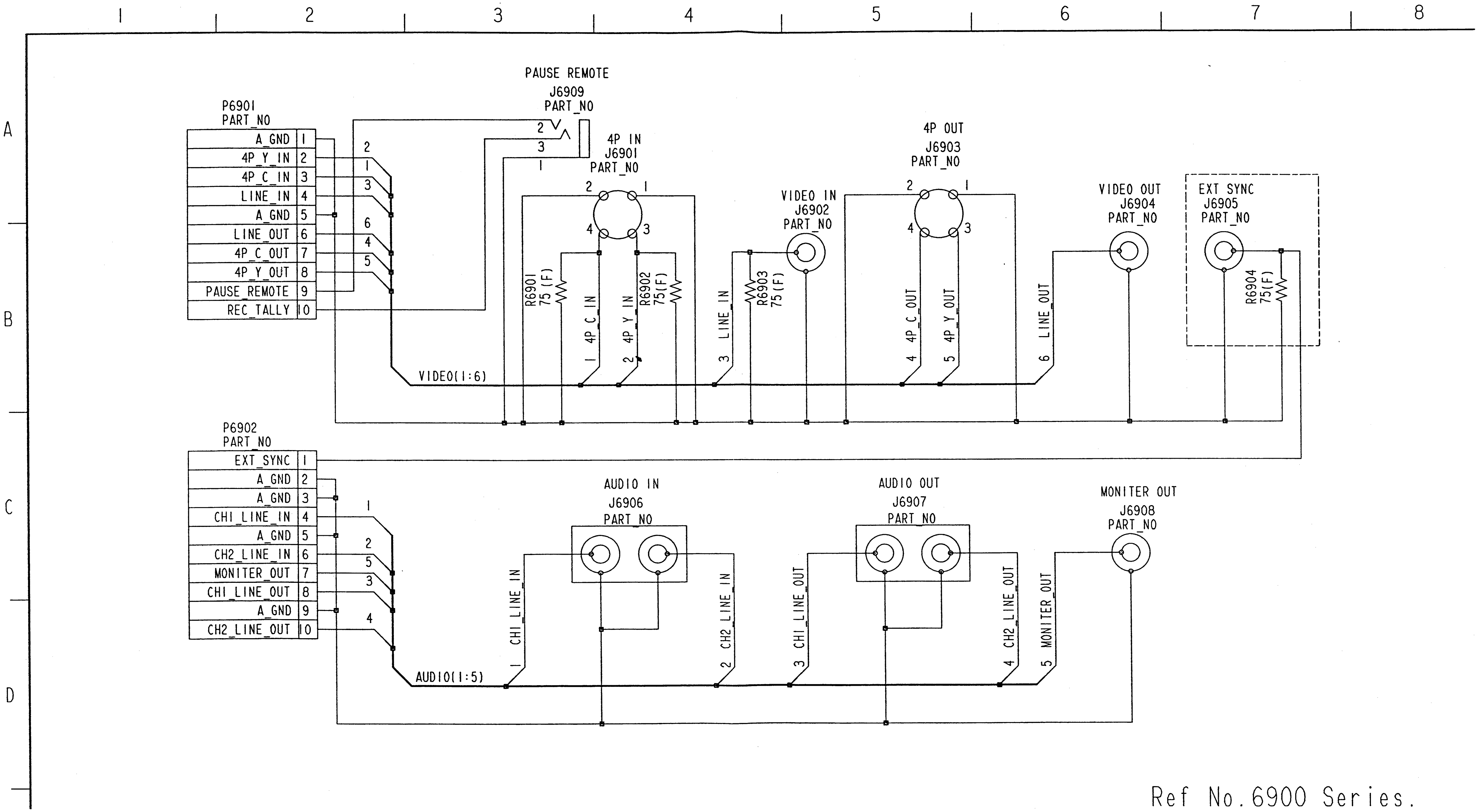
HEAD AMP SCHEMATIC DIAGRAM (E12: Page CBA-10)


P5001
GND 11
REC Y 10
GND 9
REC C 8
RF C 7
H.A.SW 6
GND 5
RF Y 4
ENV.SEL 3
HSW 2
PLAY 5V 1
P5003 VJP3091
HIFI D REC(L) 1
TRIC (H) 2
REC 12V 3
REC IN 4
GND 5
RF OUT 6
5V 7
GND 8
A.HSW 9
SH (H) 10
TL MODE(H)(D14C) 11
FLYING E(H)(D117,118)
V.REC 12V(D191)
P5003 VJP3091
REC 12V 1
2
GND 3
P5002
1 L* HEAD
2 COM.HEAD
3 R* HEAD
4 NOR R HEAD
5 COM.HEAD
6 NOR L HEAD
7 G N D
8 A.HEAD L
9 A.HEAD C
10 A.HEAD R
11 FLY_E HEAD
12 FLY_E GND
IC5001 AN3334K
IC5002 BA7740FS
IC5003 AN3370
IC5003
QR5001 MRN1404
Q5001 M5B709
Q5002 2SC2295
Q5003 XN4504-TW
Q5004 2SC2295
Q5005 2SC2295
D5001 MA151K
D5002 MA151K
D5004 MA151K-TW
VR5001 2KB
VR5002 2KB
REC Y
REC C
TP5001
REC HF
TP5002 (L)
TP5003 (H)
L5001 100U
L5002 100u
L5003 100u
L5004 100u
L5007 100u
L5008 100u
AGC.DET
VCA
PRE
REC
SELECT REC/P.B
1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H

*-REFER TO THE COMPARISON CHART

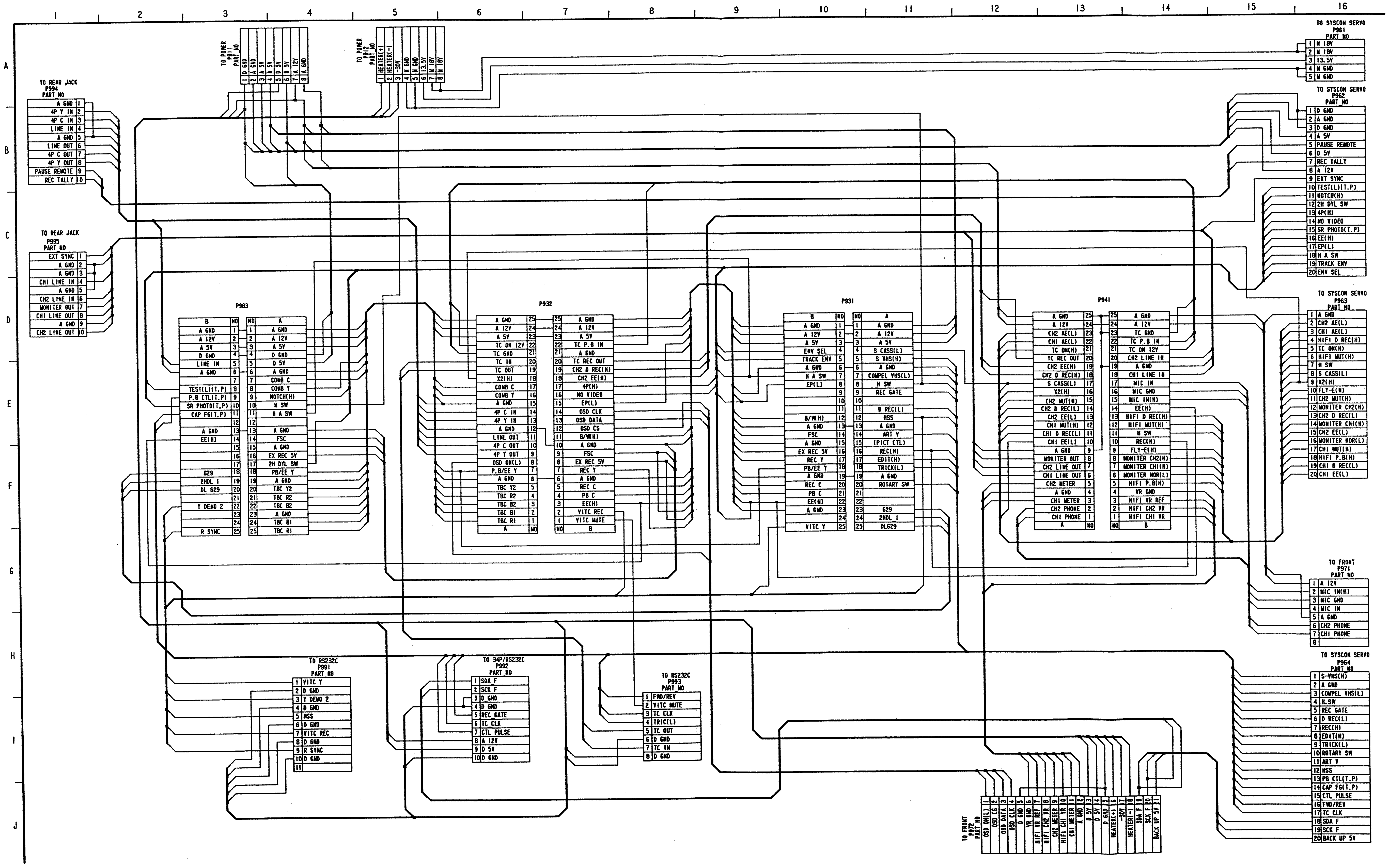
Ref No.5000 Series.

REAR JACK SCHEMATIC DIAGRAM (E13: Page CBA-12)


1
2
3
4
5
6
7
8
A
B
C
D
PAUSE REMOTE
J6909
PART_NO
P6901
PART_NO
A_GND 1
4P_Y_IN 2
4P_C_IN 3
LINE_IN 4
A_GND 5
LINE_OUT 6
4P_C_OUT 7
4P_Y_OUT 8
PAUSE_REMOTE 9
REC_TALLY 10
4P IN
J6901
PART_NO
VIDEO IN
J6902
PART_NO
4P OUT
J6903
PART_NO
VIDEO OUT
J6904
PART_NO
EXT SYNC
J6905
PART_NO
R6901
75(F)
R6902
75(F)
R6903
75(F)
R6904
75(F)
1 4P_C_IN
2 4P_Y_IN
3 LINE_IN
4 4P_C_OUT
5 4P_Y_OUT
6 LINE_OUT
VIDEO(1:6)
P6902
PART_NO
EXT_SYNC 1
A_GND 2
A_GND 3
CH1_LINE_IN 4
A_GND 5
CH2_LINE_IN 6
MONITER_OUT 7
CH1_LINE_OUT 8
A_GND 9
CH2_LINE_OUT 10
AUDIO IN
J6906
PART_NO
AUDIO OUT
J6907
PART_NO
MONITER OUT
J6908
PART_NO
1 CH1_LINE_IN
2 CH2_LINE_IN
3 CH1_LINE_OUT
4 CH2_LINE_OUT
5 MONITER_OUT
AUDIO(1:5)

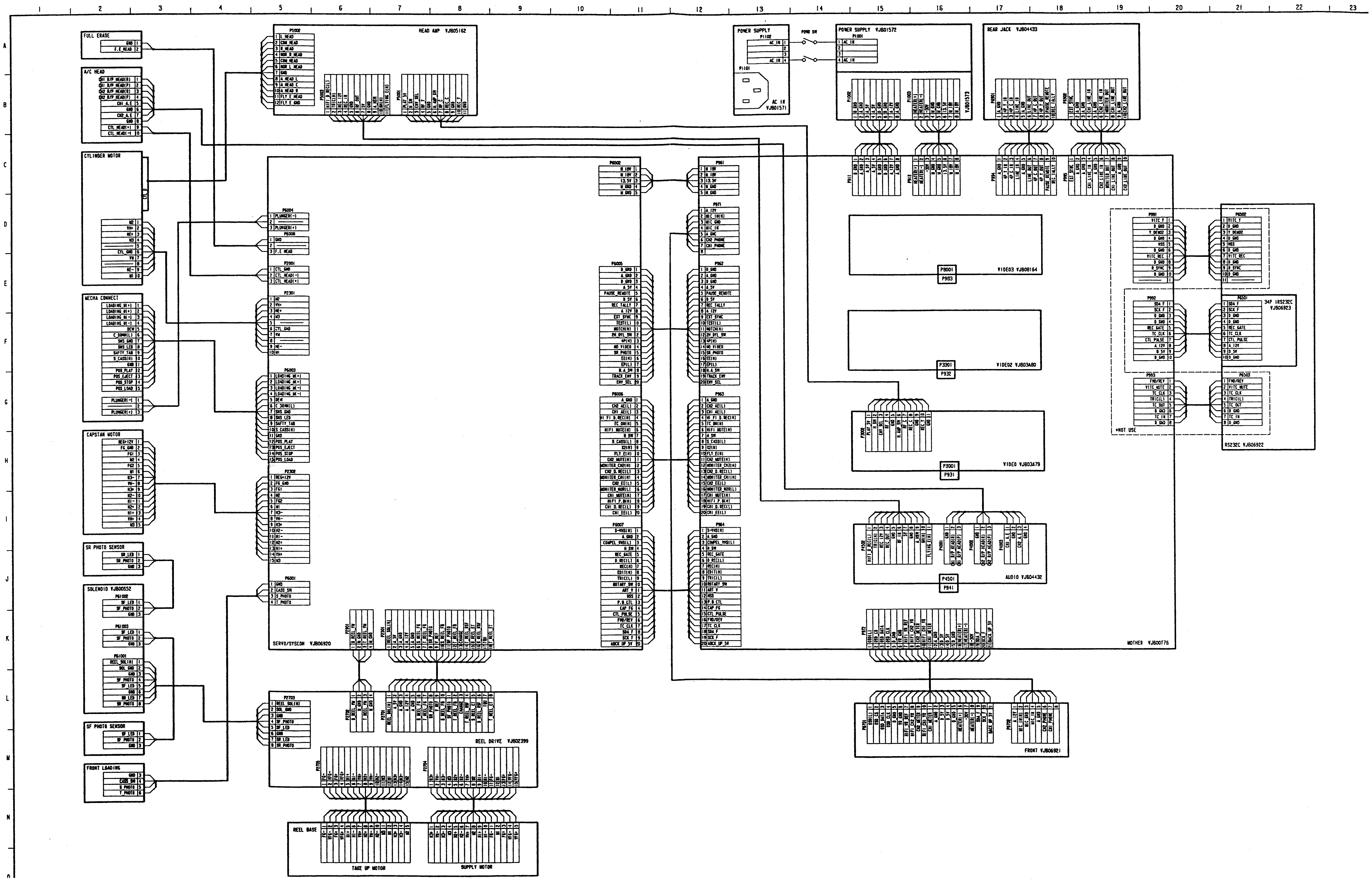
Ref No.6900 Series.

MOTHER SCHEMATIC DIAGRAM (E9: Page CBA-11)



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
TO POWER P911 PART NO
1 D GND
2 A GND
3 A 5V
4 A 5V
5 D 5V
6 D 5V
7 A 12V
8 A GND
TO POWER P912 PART NO
1 HEATER(+)
2 HEATER(-)
3 -30V
4 M GND
5 M GND
6 13.5V
7 M 18V
8 M 18V
TO REAR JACK P994 PART NO
A GND 1
4P Y IN 2
4P C IN 3
LINE IN 4
A GND 5
LINE OUT 6
4P C OUT 7
4P Y OUT 8
PAUSE REMOTE 9
REC TALLY 10
TO REAR JACK P995 PART NO
EXT SYNC 1
A GND 2
A GND 3
CH1 LINE IN 4
A GND 5
CH2 LINE IN 6
MONITER OUT 7
CH1 LINE OUT 8
A GND 9
CH2 LINE OUT 10
P963
B NO NO A
A GND 1 1 A GND
A 12V 2 2 A 12V
A 5V 3 3 A 5V
D GND 4 4 D GND
LINE IN 5 5 D 5V
A GND 6 6 A GND
7 7 COMB C
TEST(L)(T.P) 8 8 COMB Y
P.B CTL(T.P) 9 9 NOTCH(H)
SR PHOTO(T.P) 10 10 H SW
CAP FG(T.P) 11 11 H A SW
12 12
A GND 13 13 A GND
EE(H) 14 14 FSC
15 15 A GND
16 16 EX REC 5V
17 17 2H DYL SW
629 18 18 PB/EE Y
2HDL I 19 19 A GND
DL 629 20 20 TBC Y2
21 21 TBC R2
Y DEMO 2 22 22 TBC B2
23 23 A GND
24 24 TBC B1
R SYNC 25 25 TBC R1
P932
A GND 25 25 A GND
A 12V 24 24 A 12V
A 5V 23 23 A 5V
TC ON 12V 22 22 TC P.B IN
TC GND 21 21 A GND
TC IN 20 20 TC REC OUT
TC OUT 19 19 CH2 D REC(H)
X2(H) 18 18 CH2 EE(H)
COMB C 17 17 4P(H)
COMB Y 16 16 NO VIDEO
A GND 15 15 EP(L)
4P C IN 14 14 OSD CLK
4P Y IN 13 13 OSD DATA
A GND 12 12 OSD CS
LINE OUT 11 11 B/W(H)
4P C OUT 10 10 A GND
4P Y OUT 9 9 FSC
OSD ON(L) 8 8 EX REC 5V
P.B/EE Y 7 7 REC Y
A GND 6 6 A GND
TBC Y2 5 5 REC C
TBC R2 4 4 PB C
TBC B2 3 3 EE(H)
TBC B1 2 2 VITC REC
TBC R1 1 1 VITC MUTE
A NO NO B
P931
B NO NO A
A GND 1 1 A GND
A 12V 2 2 A 12V
A 5V 3 3 A 5V
ENV SEL 4 4 S CASS(L)
TRACK ENV 5 5 S VHS(H)
A GND 6 6 A GND
H A SW 7 7 COMPEL VHS(L)
EP(L) 8 8 H SW
9 9 REC GATE
10 10
11 11 D REC(L)
B/W(H) 12 12 HSS
A GND 13 13 A GND
FSC 14 14 ART Y
A GND 15 15 (PICT CTL)
EX REC 5V 16 16 REC(H)
REC Y 17 17 EDIT(H)
PB/EE Y 18 18 TRICK(L)
A GND 19 19 A GND
REC C 20 20 ROTARY SW
PB C 21 21
EE(H) 22 22
A GND 23 23 629
24 24 2HDL I
VITC Y 25 25 DL629
P941
A GND 25 25 A GND
A 12V 24 24 A 12V
CH2 AE(L) 23 23 TC GND
CH1 AE(L) 22 22 TC P.B IN
TC ON(H) 21 21 TC ON 12V
TC REC OUT 20 20 CH2 LINE IN
CH2 EE(H) 19 19 A GND
CH2 D REC(H) 18 18 CH1 LINE IN
S CASS(L) 17 17 MIC IN
X2(H) 16 16 MIC GND
CH2 MUT(H) 15 15 MIC IN(H)
CH2 D REC(L) 14 14 EE(H)
CH2 EE(L) 13 13 HIFI D REC(H)
CH1 MUT(H) 12 12 HIFI MUT(H)
CH1 D REC(L) 11 11 H SW
CH1 EE(L) 10 10 REC(H)
A GND 9 9 FLY-E(H)
MONITER OUT 8 8 MONITER CH2(H)
CH2 LINE OUT 7 7 MONITER CH1(H)
CH1 LINE OUT 6 6 MONITER NOR(L)
CH2 METER 5 5 HIFI P.B(H)
A GND 4 4 VR GND
CH1 METER 3 3 HIFI VR REF
CH2 PHONE 2 2 HIFI CH2 VR
CH1 PHONE 1 1 HIFI CH1 VR
A NO NO B
TO SYSCON SERVO P961 PART NO
1 M 18V
2 M 18V
3 13.5V
4 M GND
5 M GND
TO SYSCON SERVO P962 PART NO
1 D GND
2 A GND
3 D GND
4 A 5V
5 PAUSE REMOTE
6 D 5V
7 REC TALLY
8 A 12V
9 EXT SYNC
10 TEST(L)(T.P)
11 NOTCH(H)
12 2H DYL SW
13 4P(H)
14 NO VIDEO
15 SR PHOTO(T.P)
16 EE(H)
17 EP(L)
18 H A SW
19 TRACK ENV
20 ENV SEL
TO SYSCON SERVO P963 PART NO
1 A GND
2 CH2 AE(L)
3 CH1 AE(L)
4 HIFI D REC(H)
5 TC ON(H)
6 HIFI MUT(H)
7 H SW
8 S CASS(L)
9 X2(H)
10 FLY-E(H)
11 CH2 MUT(H)
12 MONITER CH2(H)
13 CH2 D REC(L)
14 MONITER CH1(H)
15 CH2 EE(L)
16 MONITER NOR(L)
17 CH1 MUT(H)
18 HIFI P.B(H)
19 CH1 D REC(L)
20 CH1 EE(L)
TO FRONT P971 PART NO
1 A 12V
2 MIC IN(H)
3 MIC GND
4 MIC IN
5 A GND
6 CH2 PHONE
7 CH1 PHONE
8
TO SYSCON SERVO P964 PART NO
1 S-VHS(H)
2 A GND
3 COMPEL VHS(L)
4 H.SW
5 REC GATE
6 D REC(L)
7 REC(H)
8 EDIT(H)
9 TRICK(L)
10 ROTARY SW
11 ART Y
12 HSS
13 PB CTL(T.P)
14 CAP FG(T.P)
15 CTL PULSE
16 FWD/REV
17 TC CLK
18 SDA F
19 SCK F
20 BACK UP 5V
TO RS232C P991 PART NO
1 VITC Y
2 D GND
3 Y DEMO 2
4 D GND
5 HSS
6 D GND
7 VITC REC
8 D GND
9 R SYNC
10 D GND
11
TO 34P/RS232C P992 PART NO
1 SDA F
2 SCK F
3 D GND
4 D GND
5 REC GATE
6 TC CLK
7 CTL PULSE
8 A 12V
9 D 5V
10 D GND
TO RS232C P993 PART NO
1 FWD/REV
2 VITC MUTE
3 TC CLK
4 TRIC(L)
5 TC OUT
6 D GND
7 TC IN
8 D GND
TO FRONT P972 PART NO
1 OSD ON(L)
2 OSD CS
3 OSD DATA
4 OSD CLK
5 D GND
6 VR GND
7 HIFI VR REF
8 HIFI CH2 VR
9 CH2 METER
10 HIFI CH1 VR
11 CH1 METER
12 A GND
13 D 5V
14 D 5V
15 D GND
16 HEATER(+)
17 -30V
18 HEATER(-)
19 SDA F
20 SCK F
21 BACK UP 5V

INTERCONNECTION SCHEMATIC DIAGRAM


FULL ERASE
A/C HEAD
CYLINDER MOTOR
MECHA CONNECT
CAPSTAN MOTOR
SR PHOTO SENSOR
SOLENOID VJB00552
SF PHOTO SENSOR
FRONT LOADING
HEAD AMP VJB05162
POWER SUPPLY
POWR SW
POWER SUPPLY VJB01572
AC IN VJB01571
REAR JACK VJB04433
VIDEO3 VJB08164
VIDEO2 VJB03A80
VIDEO VJB03A79
AUDIO VJB04432
FRONT VJB06921
34P RS232C VJ506923
RS232C VJB06922
*NOT USE
SERVO/SYSCON VJB06920
MOTHER VJB00776
REEL DRIVE VJB02399
REEL BASE
TAKE UP MOTOR
SUPPLY MOTOR

SECTION 7

CIRCUIT BOARDS

CONTENTS

POWER SUPPLY (1~3) C.B.A. ········ CBA-3
REEL DRIVE C.B.A. ········ CBA-3
FRONT (1~4) C.B.A. ········ CBA-4
SYSTEM CONTROL & SERVO C.B.A. ········ CBA-5
AUDIO C.B.A. ········ CBA-6
VIDEO (1) C.B.A. ········ CBA-7
VIDEO (2) C.B.A. ········ CBA-8
VIDEO (3) C.B.A. ········ CBA-9
FM AUDIO PACK C.B.A. ········ CBA-10
HEAD AMP C.B.A. ········ CBA-10
MOTHER C.B.A. ········ CBA-11
REAR JACK C.B.A. ········ CBA-12

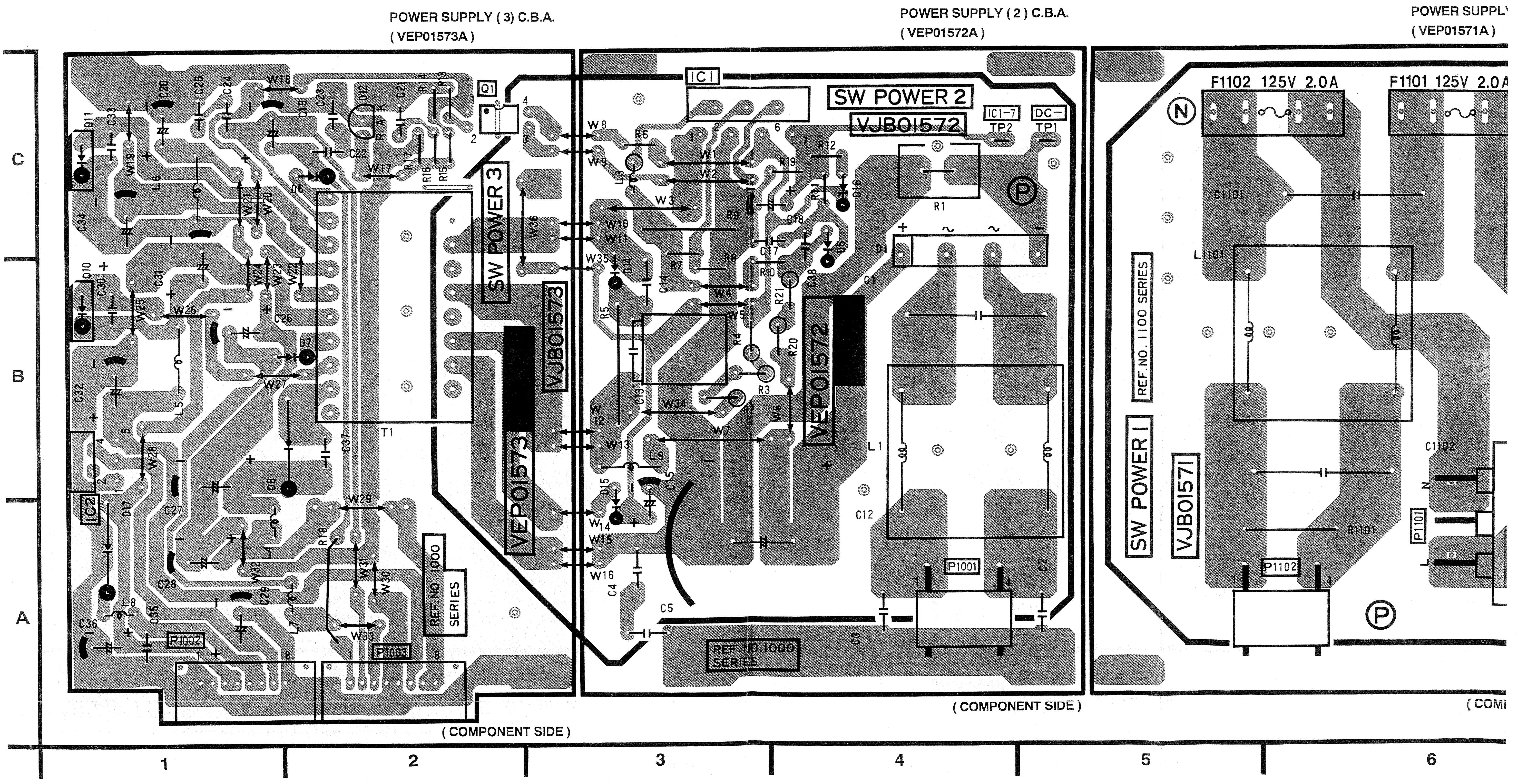
IMPORTANT SAFETY NOTICE

COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE

DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

POWER SUPPLY (1) C.B.A. (VEP01571A) / POWER SUPPLY (2) C.B.A. (VEP01572A) / POWER SUPPLY (3) C.B.A. (VEP01573A)

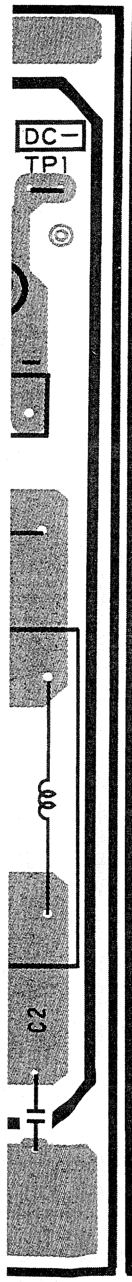


POWER SUPPLY (3) C.B.A.
(VEP01573A)
POWER SUPPLY (2) C.B.A.
(VEP01572A)
POWER SUPPLY
(VEP01571A)
C
B
A
1
2
3
4
5
6
SW POWER 3
VJB01573
VEP01573
REF. NO. 1000 SERIES
(COMPONENT SIDE)
IC1
SW POWER 2
VJB01572
VEP01572
IC1-7 TP2
DC− TP1
REF. NO. 1000 SERIES
(COMPONENT SIDE)
F1102 125V 2.0A
F1101 125V 2.0A
SW POWER 1
VJB01571
REF. NO. 1100 SERIES
(COMI
Q1
T1
IC2
P1002
P1003
P1001
P1102
P1101
D11
D10
D12
D6
D7
D8
D17
D14
D15
D16
D5
C33
C34
C20
C25
C24
C23
C19
C22
C21
C30
C31
C26
C32
C27
C28
C29
C35
C36
C37
C14
C13
C15
C4
C5
C3
C18
C17
C38
C1
C12
C2
C1101
C1102
L6
L5
L4
L7
L8
L3
L9
L1
L1101
R14
R13
R17
R16
R15
R18
R6
R12
R19
R11
R9
R8
R7
R10
R21
R5
R4
R20
R3
R2
R1
R1101
B1
W18
W19
W17
W21
W20
W24
W23
W22
W25
W26
W27
W28
W29
W32
W31
W30
W33
W36
W8
W9
W10
W11
W35
W12
W13
W14
W15
W16
W1
W2
W3
W4
W5
W34
W7
W6
N
L

Y (3) C.B.A. (VEP01573A)

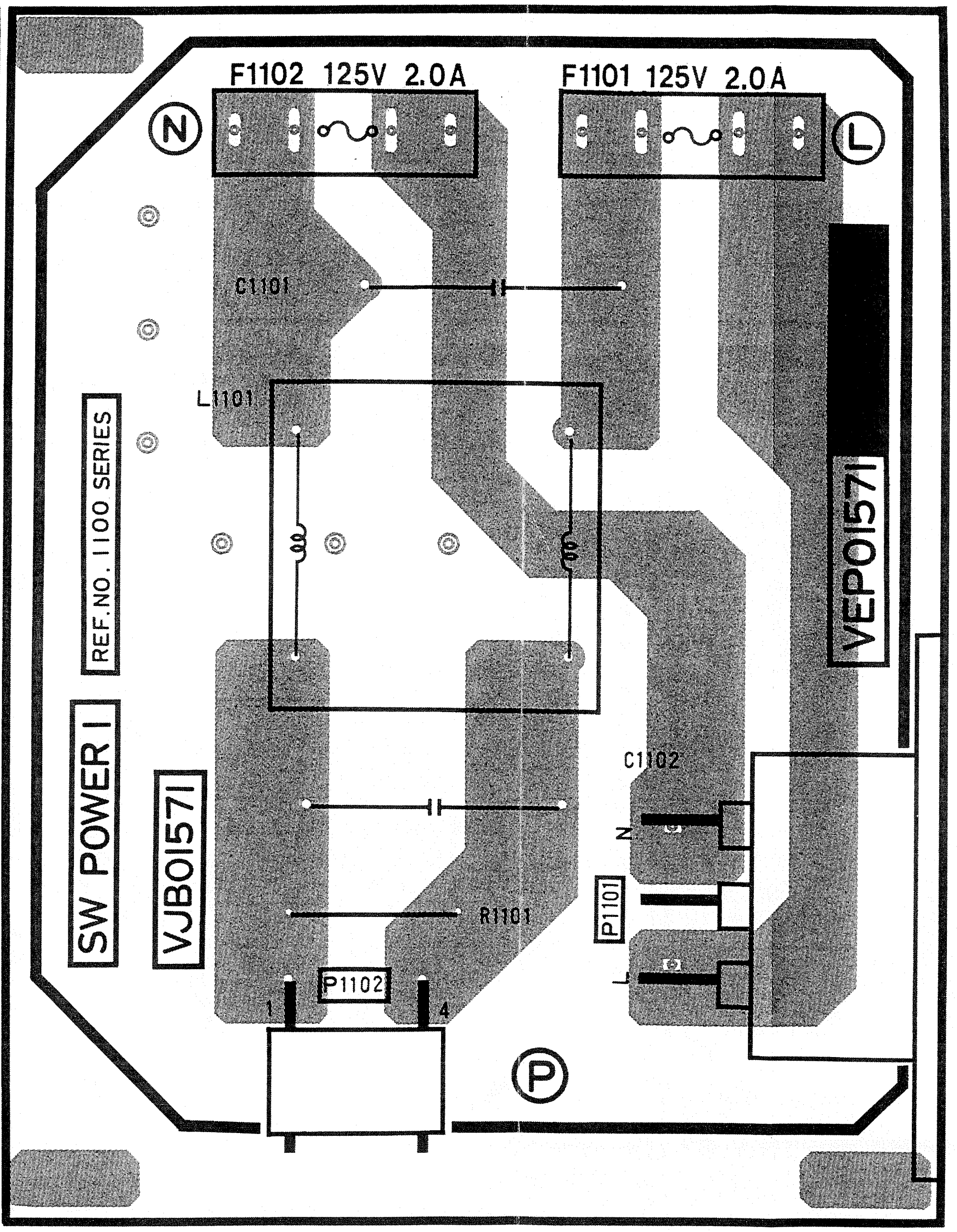
REEL DRIVE C.B.A. (VEP02399A)

C.B.A.



NT SIDE)

POWER SUPPLY (1) C.B.A.
(VEP01571A)


F1102 125V 2.0A
F1101 125V 2.0A
N
L
C1101
L1101
REF.NO. 1100 SERIES
SW POWER I
VJB01571
VEP01571
C1102
P1101
R1101
P1102
1
4
P

(COMPONENT SIDE)

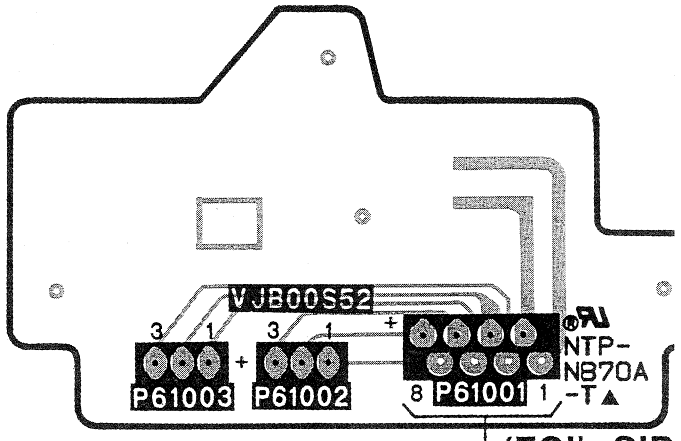
5

6

POWER	
Transistor	
Q1001	C-2
Integrated Circuit	
IC1001	C-3
IC1002	B-1
Test Point	
TP1001	C-5
TP1002	C-4
Connector	
P1001	A-4
P1002	A-1
P1003	A-2
P1101	A-6
P1102	A-5

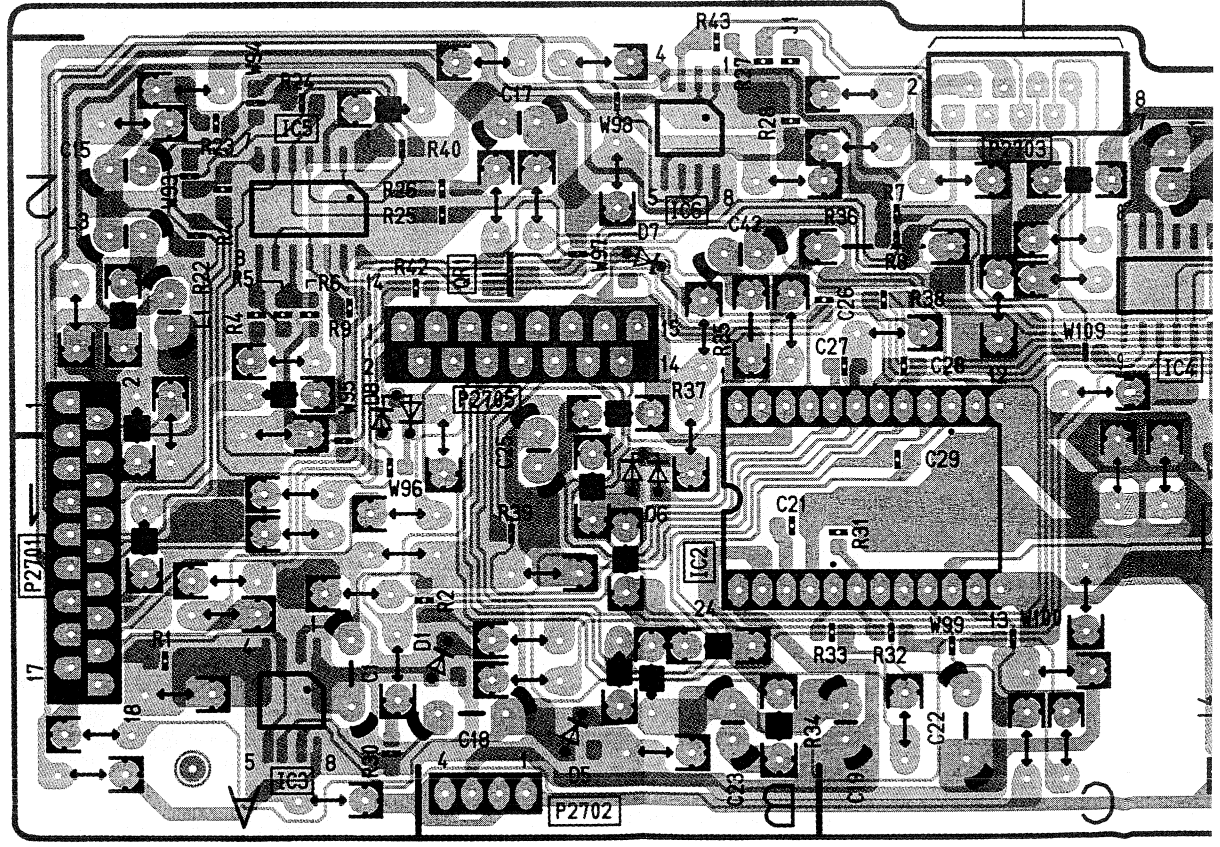
ADDRESS INFORMATION

SOLENOID UNIT (VXA4840)


VJB00S52
3
1
3
1
+
+
P61003
P61002
P61001
8
1
NTP-N870A-T

(FOIL SID

REEL DRIVE C.B.A. (VEP02399A)

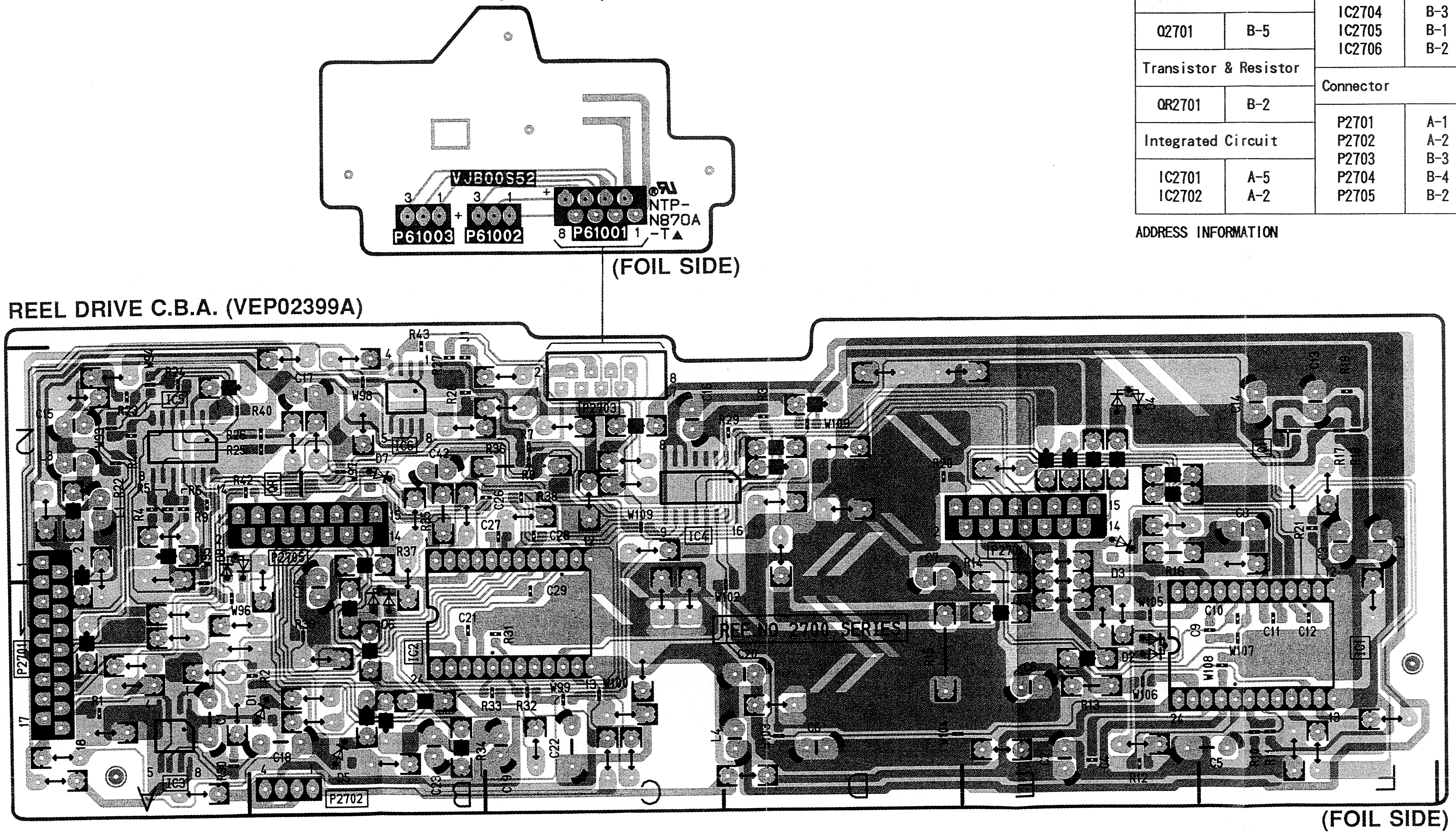

R43
IC5
C17
W98
R40
R26
R25
IC6
D7
C43
R36
R8
C28
R38
W109
IC4
C27
C26
R37
P2705
W96
R39
D6
C21
R31
C29
IC2
P2701
R1
D1
R2
C18
IC3
P2702
D5
R34
C22
C23
R33
R32
W99
W100
C15
R22
R5
R4
R6
R42
R9
P2703
17
18
15
14
24
13
12
5
8
4
2
1

REEL DRIVE C.B.A. (VEP02399A)

REEL DRIVE			
Transistor		IC2703	A-1
Q2701	B-5	IC2704	B-3
Transistor & Resistor		IC2705	B-1
QR2701	B-2	IC2706	B-2
Integrated Circuit		Connector	
IC2701	A-5	P2701	A-1
IC2702	A-2	P2702	A-2
		P2703	B-3
		P2704	B-4
		P2705	B-2

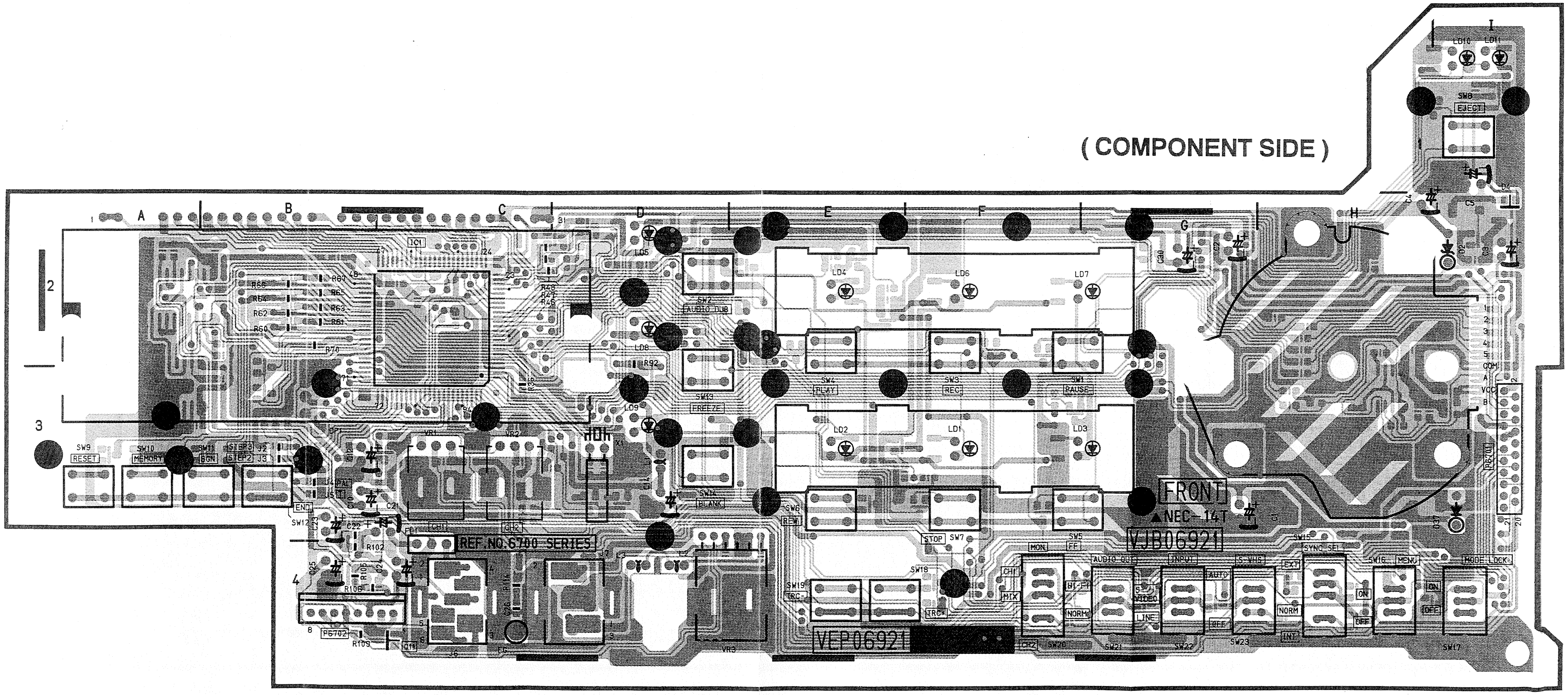
ADDRESS INFORMATION

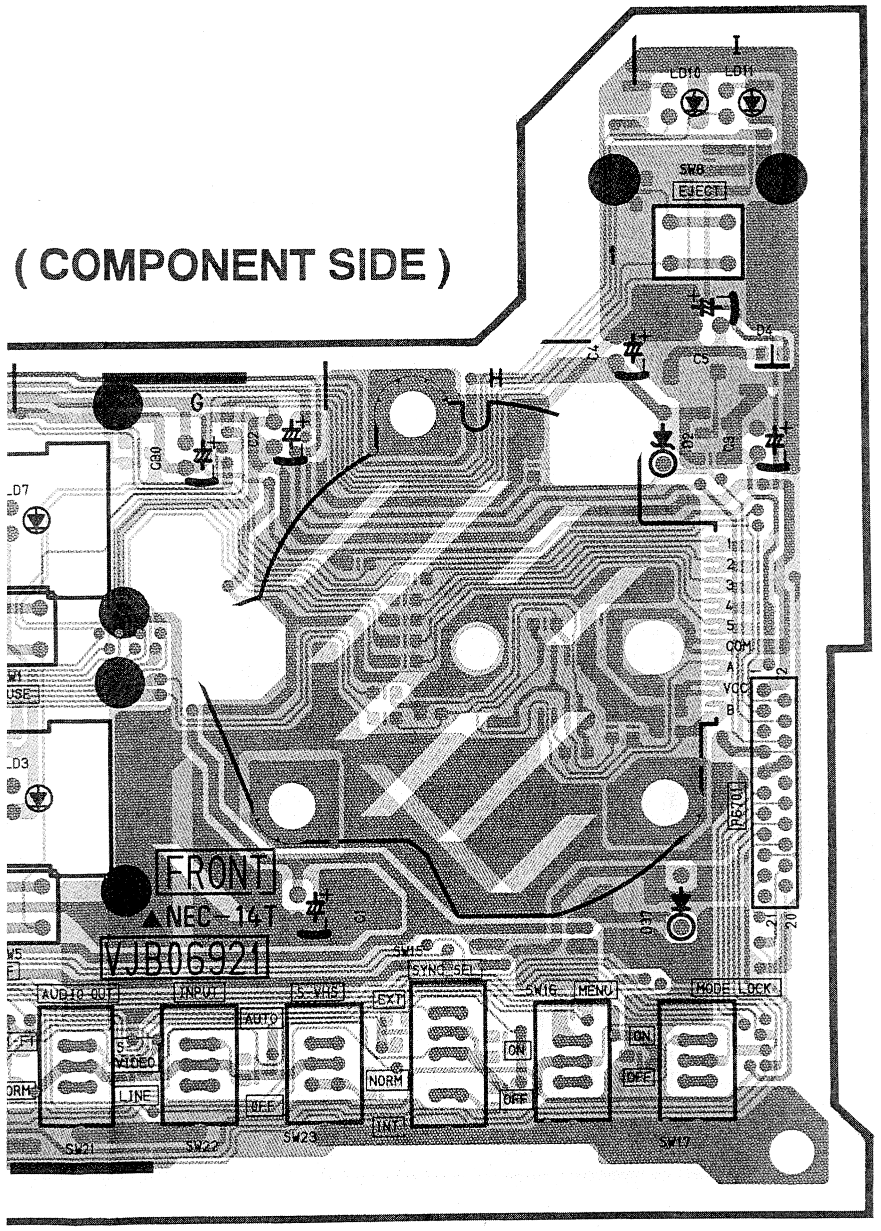
SOLENOID UNIT (VXA4840)


VJB00S52
3
1
+
P61003
P61002
8
P61001
1
NTP-
N870A
-T▲
(FOIL SIDE)
REEL DRIVE C.B.A. (VEP02399A)
P2701
P2702
P2705
P2703
IC2
IC3
IC4
IC5
IC6
REF.NO.2700 SERIES
(FOIL SIDE)

FRONT (1~4) C.B.A. (VEP06921A)

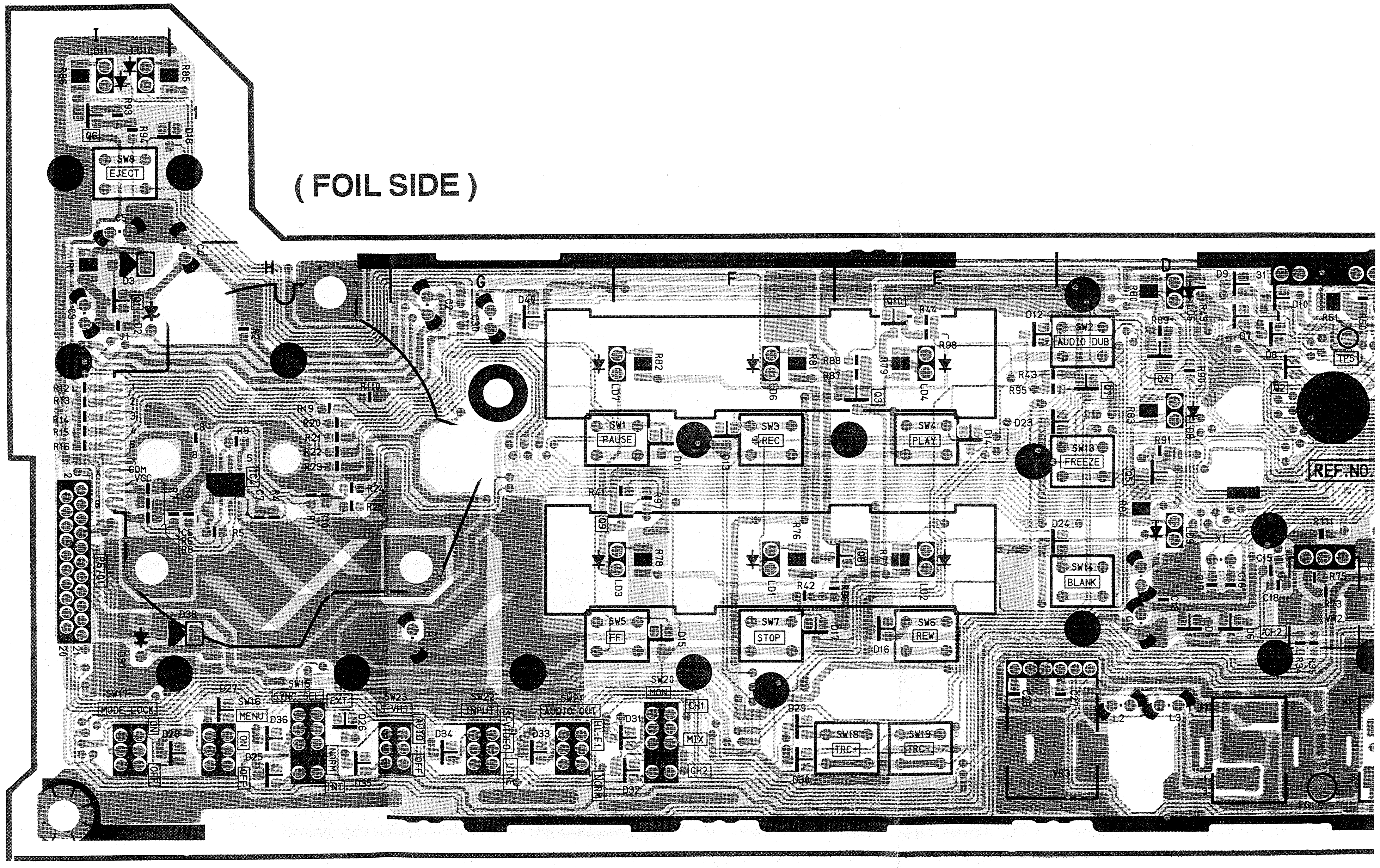
(COMPONENT SIDE)


A
B
C
D
E
F
G
H
I
1
2
3
4
IC1
LD1
LD2
LD3
LD4
LD5
LD6
LD7
LD8
LD9
LD10
LD11
SW1 PAUSE
SW2 AUDIO DUB
SW3 REC
SW4 PLAY
SW6 REW
SW5 FF
SW7 STOP
SW8 EJECT
SW9 RESET
SW10 MEMORY
SW11 BGN
SW12 END
SW13 FREEZE
SW14 BLANK
SW15 SYNC SEL
SW16 MENU
SW17 MODE LOCK
SW18 TRC+
SW19 TRC-
SW20 MON CH1 MIX CH2
SW21 AUDIO OUT HI-FI NORM
SW22 INPUT S-VIDEO VIDEO LINE
SW23 S-VHS AUTO OFF NORM
EXT INT
ON OFF
STEP3 STEP2
J2 J3
PAL
VR1
VR2
VR3
J6
CH1
CH2
REF.NO.6700 SERIES
P6702
R102
R106
R109
R60
R61
R62
R63
R64
R65
R66
R67
R92
C5
C21
C22
FRONT
▲NEC-14T
VJB06921
VEP06921
P6701
COM
VCC



(COMPONENT SIDE)

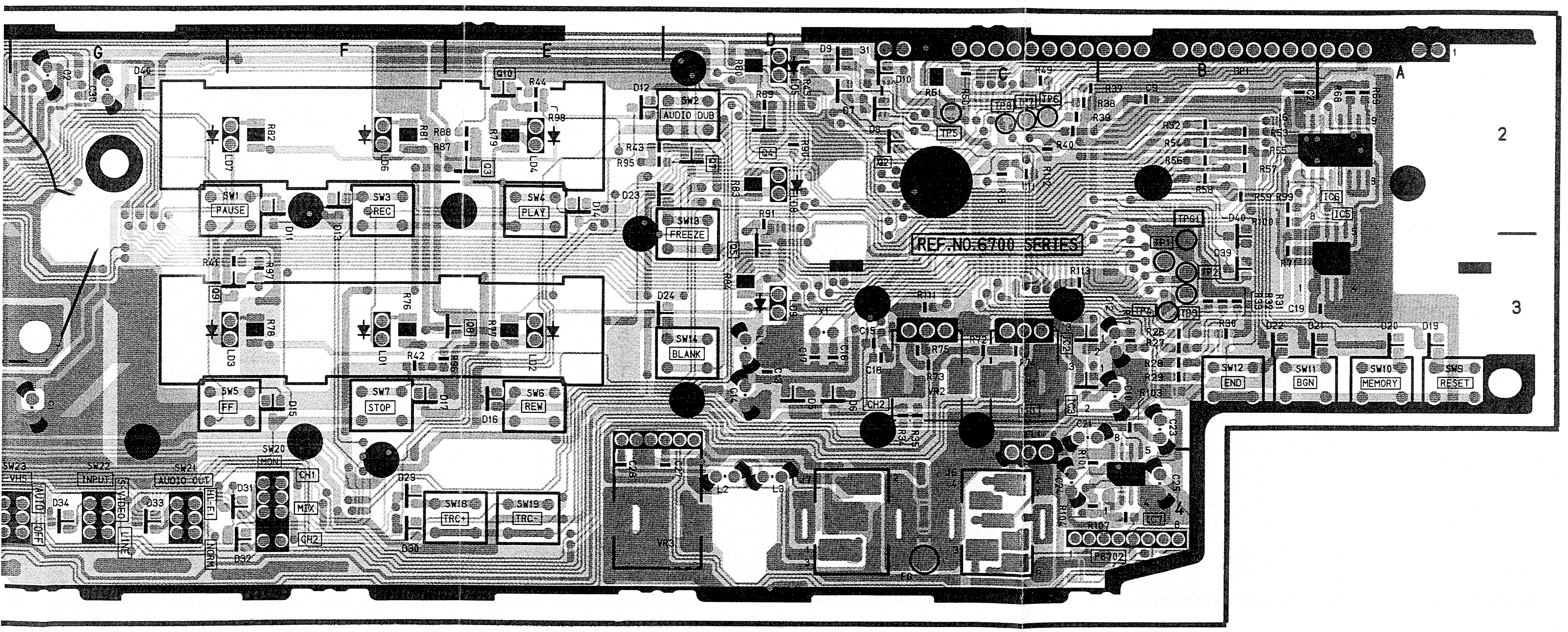
LD10
LD11
SW8
EJECT
G
H
I
FRONT
▲NEC-14T
VJB06921
AUDIO OUT
INPUT
AUTO
S-VHS
SYNC SEL
EXT
NORM
INT
ON
OFF
SW16
MENU
MODE LOCK
LINE
SW21
SW22
SW23
SW15
SW17
PAUSE
LD7
LD3
D37
P570I



(FOIL SIDE)

LD11
LD10
I
SW8
EJECT
H
G
F
E
D
SW1
PAUSE
SW3
REC
SW4
PLAY
SW2
AUDIO DUB
SW13
FREEZE
SW14
BLANK
SW5
FF
SW7
STOP
SW6
REW
SW18
TRC+
SW19
TRC-
SW17
MODE LOCK
SW16
MENU
SW15
SYNC SEL
EXT
SW23
S-VHS
SW22
INPUT
SW21
AUDIO OUT
SW20
MON
CH1
MIX
CH2
HI-FI
NORM
LINE
AUTO
ON
OFF
INT
TP5
REF.NO.
LD7
LD6
LD4
LD3
LD1
LD2
IC1
P570I
COM
VCC

SIDE)



G
F
E
D
C
B
A
2
3
SW1 PAUSE
SW3 REC
SW4 PLAY
SW2 AUDIO DUB
SW13 FREEZE
SW14 BLANK
SW5 FF
SW7 STOP
SW6 REW
SW12 END
SW11 BGN
SW10 MEMORY
SW9 RESET
SW18 TRC+
SW19 TRC-
SW20 MON
SW21 AUDIO OUT
SW22 INPUT
SW23 VHS
AUTO
OFF
HI-FI
NORM
CH1
MIX
CH2
REF.NO.6700 SERIES
VR1
VR2
VR3
P6702

FOIL SIDE

FRONT	
Transistor	
Q6701	I-2
Q6702	C-2
Q6703	E-2
Q6704	D-2
Q6705	D-3
Q6706	I-1
Q6707	D-2
Q6708	E-3
Q6709	G-3
Q6710	E-2
Integrated Circuit	
IC6702	C-3
IC6703	C-3
IC6704	H-3
IC6705	A-2
IC6706	A-2
IC6707	B-4
Test Point	
TP6701	B-3
TP6702	B-3
TP6703	B-3
TP6704	B-3
TP6705	C-2
TP6706	C-2
TP6707	C-2
TP6708	C-2
TPG6701	B-3
Adjustment	
VR6701	C-3
VR6702	C-3
VR6703	E-4

ADDRESS INFORMATION

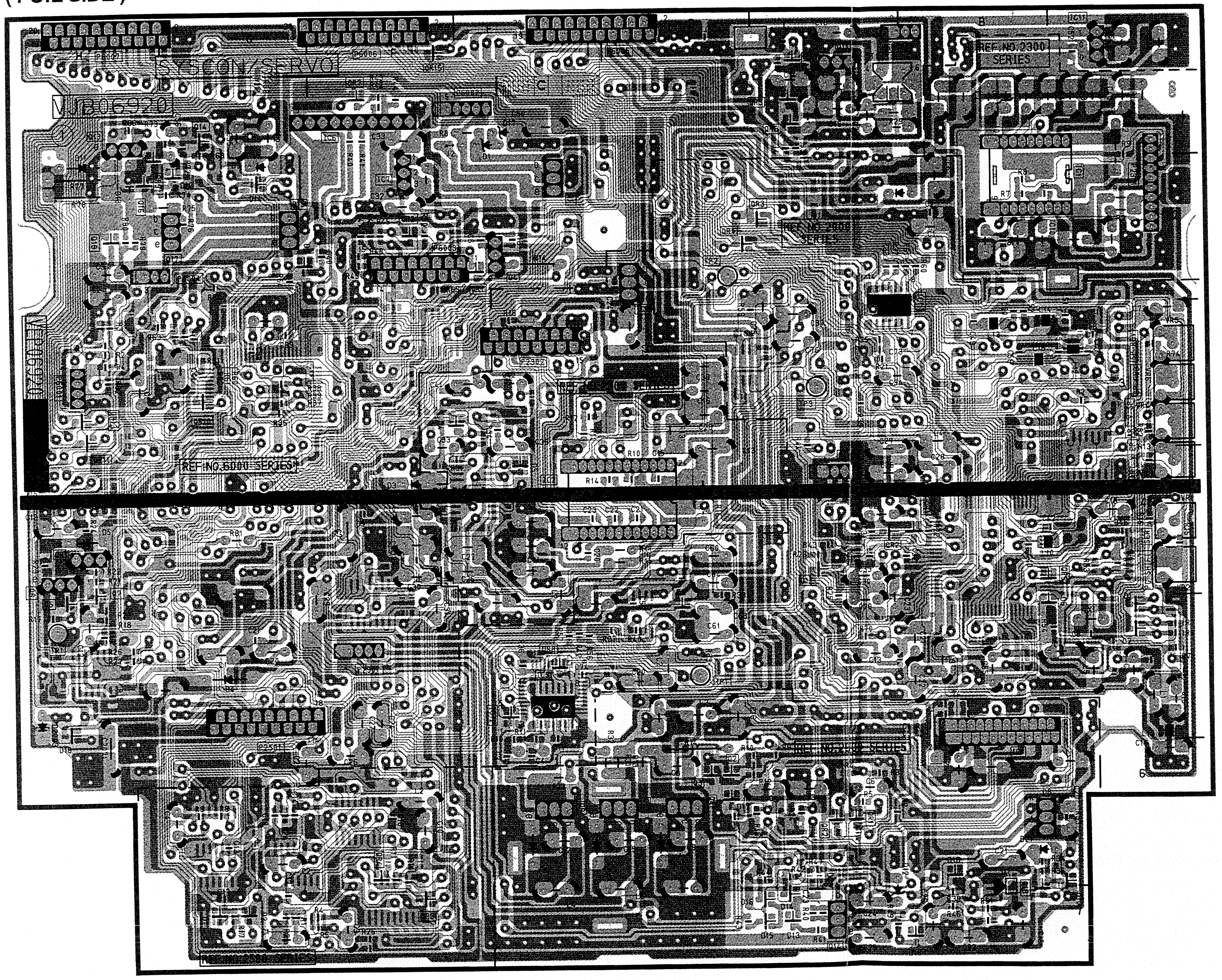
COMPONENT SIDE

FRONT	
Transistor	
Q6711	C-3
Integrated Circuit	
IC6701	C-2
Adjustment	
VR6701	C-3
VR6702	C-3
VR6703	E-4
Connector	
P6701	I-3
P6702	B-4

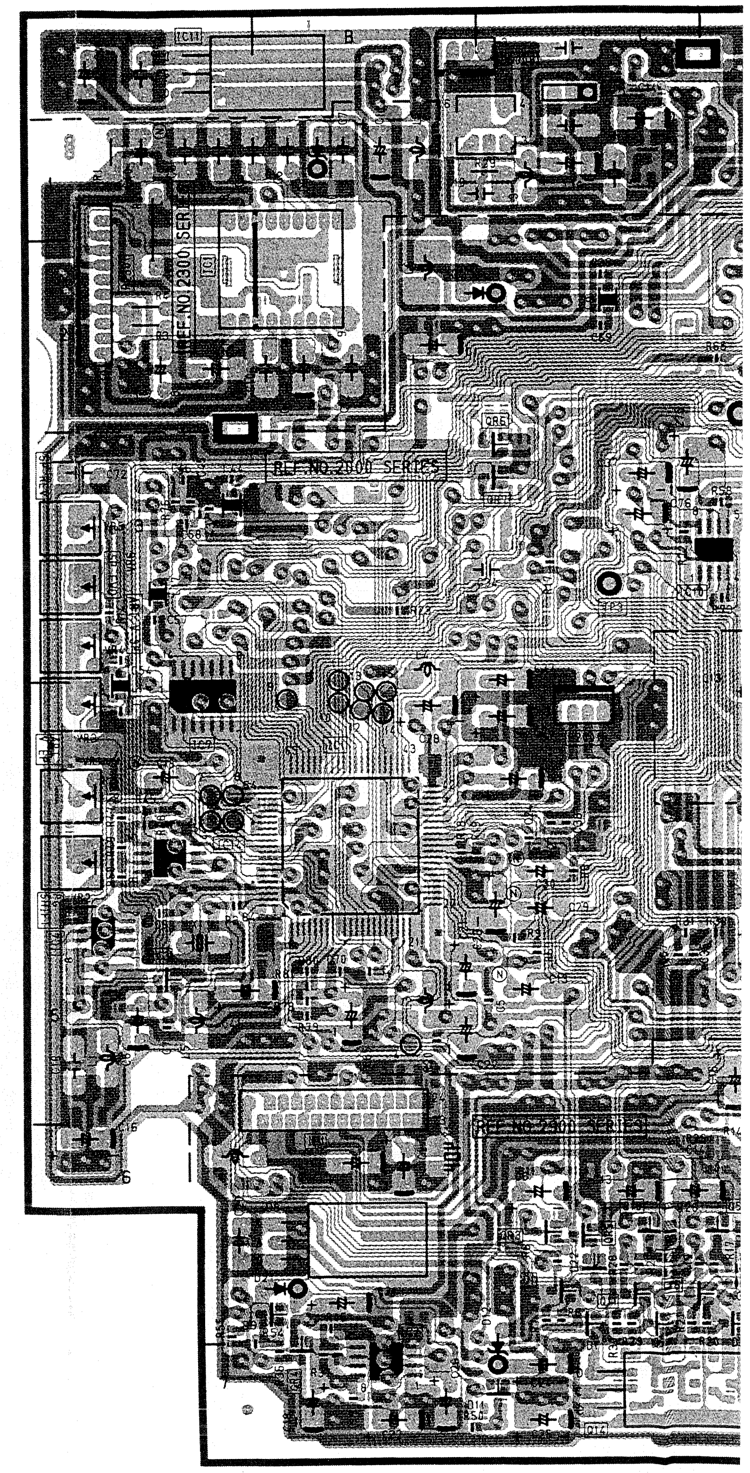
ADDRESS INFORMATION

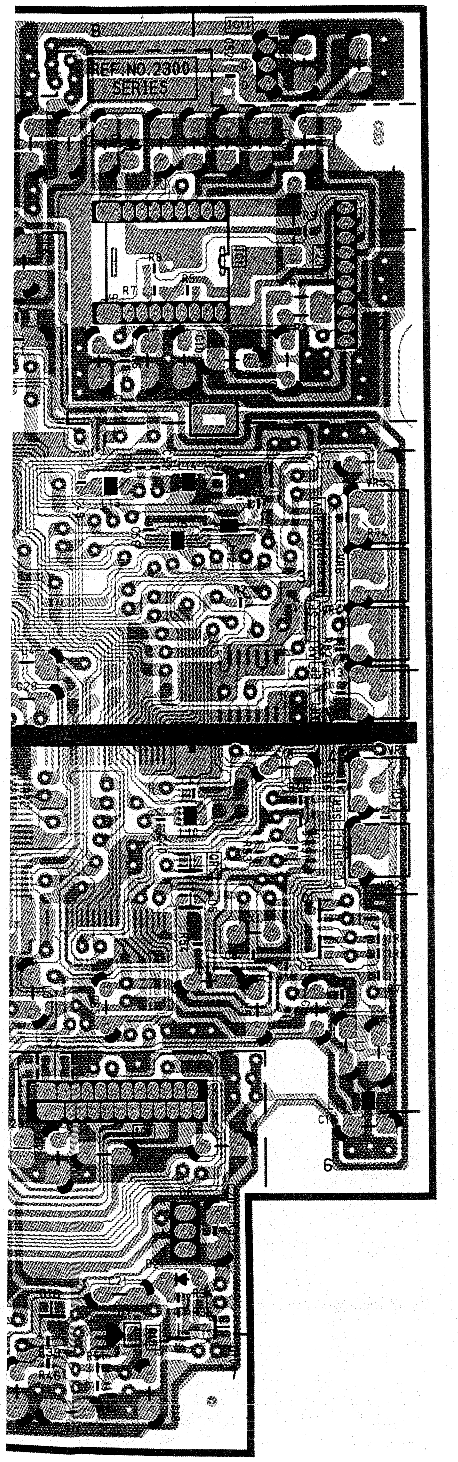
SYSTEM CONTROL & SERVO C.B.A. (VEP06920A)

(FOIL SIDE)

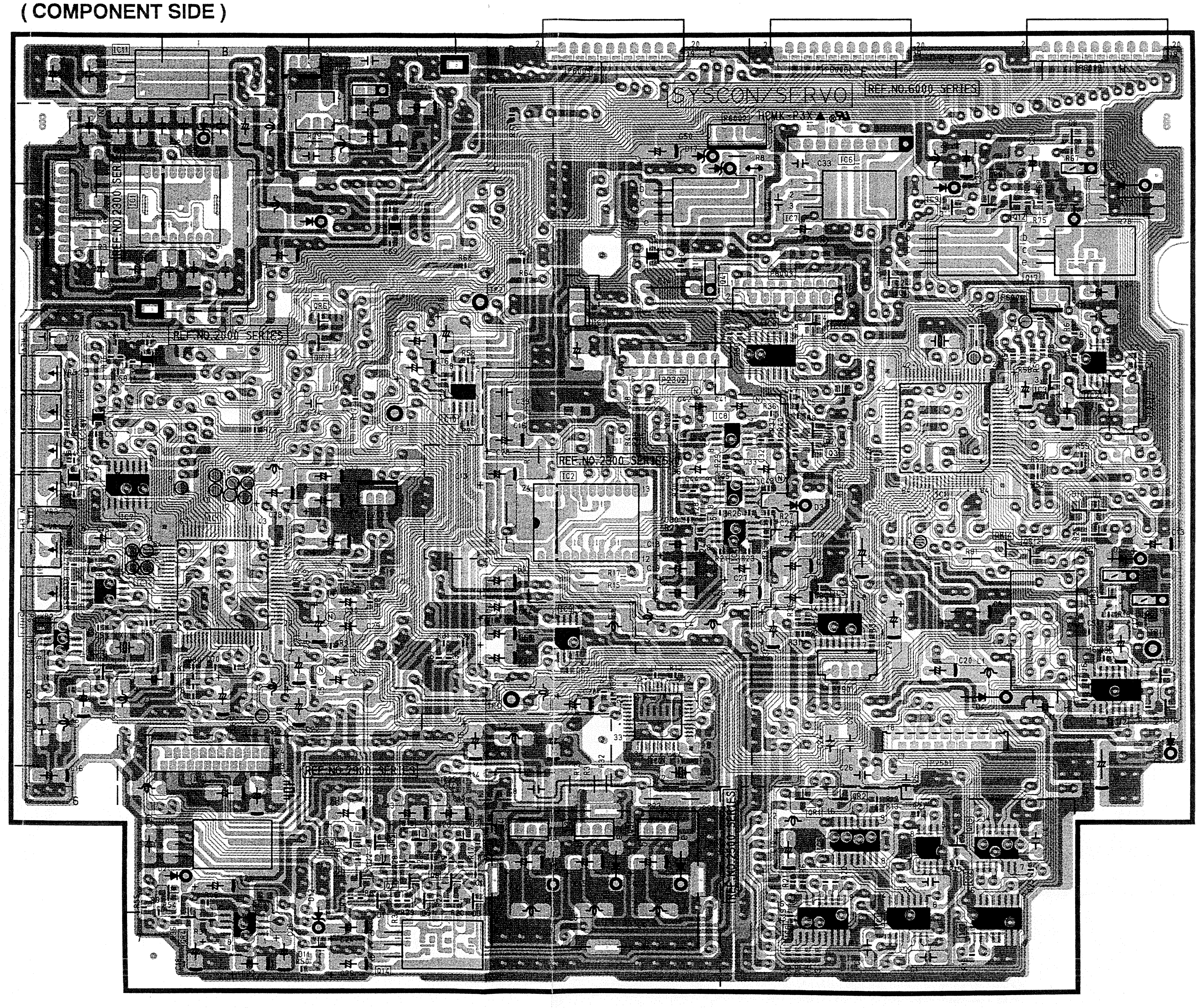

SYSCON/SERVO
VUB06920
VEP06920
REF.NO.2300 SERIES
REF.NO.2000 SERIES
REF.NO.6000 SERIES

(COMPONENT SIDE)


REF.NO.2300 SERIES
REF.NO.2000 SERIES


REF.NO.2300 SERIES

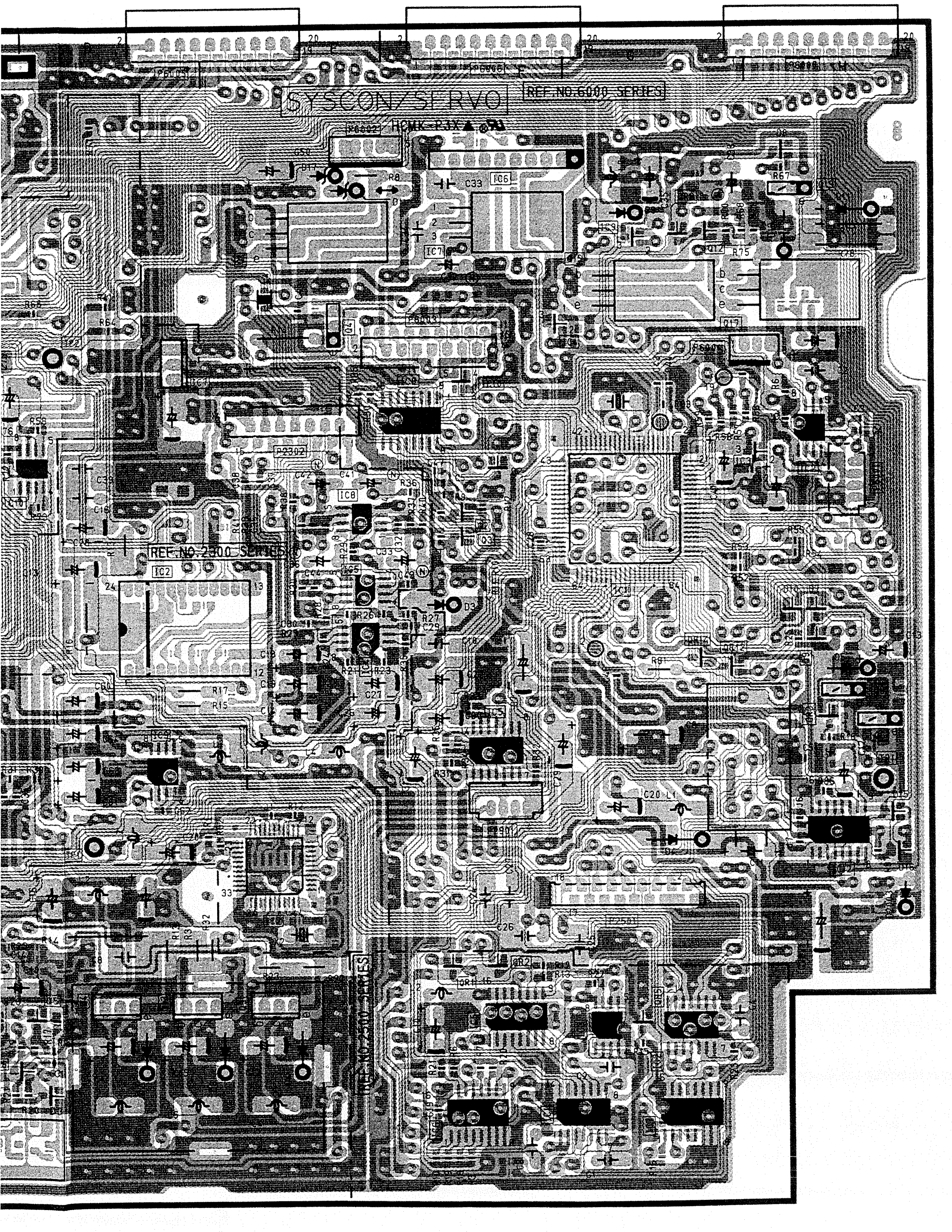
(COMPONENT SIDE)


SYSCON/SERVO
REF.NO.6000 SERIES
REF.NO.2300 SERIES
REF.NO.2000 SERIES
REF.NO.2500 SERIES

COMPONEN

SYS
Transis
Q2901 Q2904 Q2905 Q2906 Q2909 Q2910 Q2911 Q2912 Q2914 Q6001 Q6002 Q6003 Q6004 Q6006 Q6008 Q6009 Q6011 Q6012 Q6013 Q6015 Q6017
Transis
QR20 QR20 QR25 QR25 QR25 QR29 QR29 QR29 QR60 QR60 QR60 QR60
Integr
IC20 IC20 IC20 IC20 IC20 IC20 IC20 IC23 IC23 IC23 IC23

ADDRESS



COMPONENT SIDE

SYSTEM CONTROL & SERVO

Transistor	
Q2901	C-6
Q2904	D-6
Q2905	D-6
Q2906	C-6
Q2909	E-6
Q2910	C-6
Q2911	C-6
Q2912	D-6
Q2914	C-7
Q6001	E-2
Q6002	F-3
Q6003	F-3
Q6004	E-2
Q6006	H-4
Q6008	H-4
Q6009	H-4
Q6011	C-1
Q6012	G-2
Q6013	H-1
Q6015	G-2
Q6017	H-2

Transistor & Resistor	
QR2006	C-2
QR2007	C-3
QR2501	F-6
QR2502	F-6
QR2505	G-6
QR2903	C-6
QR2904	B-7
QR2905	C-6
QR6003	H-3
QR6008	G-2
QR6012	G-4
QR6014	G-4

Integrated Circuit	
IC2001	A-4
IC2001	B-4
IC2002	E-5
IC2003	A-5
IC2004	A-5
IC2009	D-4
IC2014	A-4
IC2302	D-4
IC2304	E-4
IC2305	E-4
IC2307	D-2
IC2308	E-3
IC2501	G-7
IC2502	G-6
IC2503	G-6
IC2505	F-6
IC2506	F-6
IC2507	G-7
IC2901	B-5
IC2902	B-7
IC6001	A-2
IC6001	G-3
IC6002	H-3
IC6003	H-3
IC6005	F-4
IC6006	F-1
IC6007	F-2
IC6008	F-3
IC6009	G-2
IC6010	F-3
IC6011	A-1
IC6012	H-5

Test Point	
TP2001	D-5
TP2002	D-2
TP2003	C-3

Adjustment	
VR2001	A-4
VR2002	A-4
VR2003	A-4
VR2004	A-3
VR2005	A-3
VR2006	A-3

Connector	
P2001	C-4
P2301	A-2
P2302	E-3
P2501	G-5
P2901	F-5
P6001	H-3
P6002	E-1
P6003	F-2
P6004	H-2
P6005	D-1
P6006	F-1
P6007	H-1
P6008	B-1

ADDRESS INFORMATION

FOIL SIDE

SYSTEM CONTROL & SERVO

Transistor	
Q2001	C-4
Q2902	E-6
Q2903	E-6
Q2904	E-6
Q2909	E-6
Q2912	E-6
Q2913	B-6
Q2914	C-7
Q6001	E-2
Q6004	E-2
Q6005	H-4
Q6006	H-4
Q6007	H-4
Q6008	H-4
Q6011	C-1
Q6013	H-1
Q6014	G-1
Q6015	G-2
Q6016	H-2
Q6017	G-2
Q6018	H-2

Transistor & Resistor	
QR2001	B-4
QR2002	C-4
QR2003	C-2
QR2004	D-2
QR2005	A-4
QR2008	E-5
QR2503	F-7
QR2504	F-6
QR2901	C-6
QR2902	C-6
QR6001	E-2
QR6002	F-2
QR6004	C-1
QR6005	C-1
QR6006	C-1
QR6007	F-1
QR6009	H-2
QR6010	G-3
QR6011	H-3
QR6013	H-3
QR6015	F-1

Integrated Circuit	
IC2005	E-5
IC2011	C-3
IC2012	E-5
IC2301	B-2
IC2302	E-4
IC2307	D-2
IC2901	B-5
IC6001	A-1
IC6006	F-1
IC6007	F-2

Test Point	
TP2001	D-5
TP2002	D-2
TP2003	C-3
TP6001	H-5

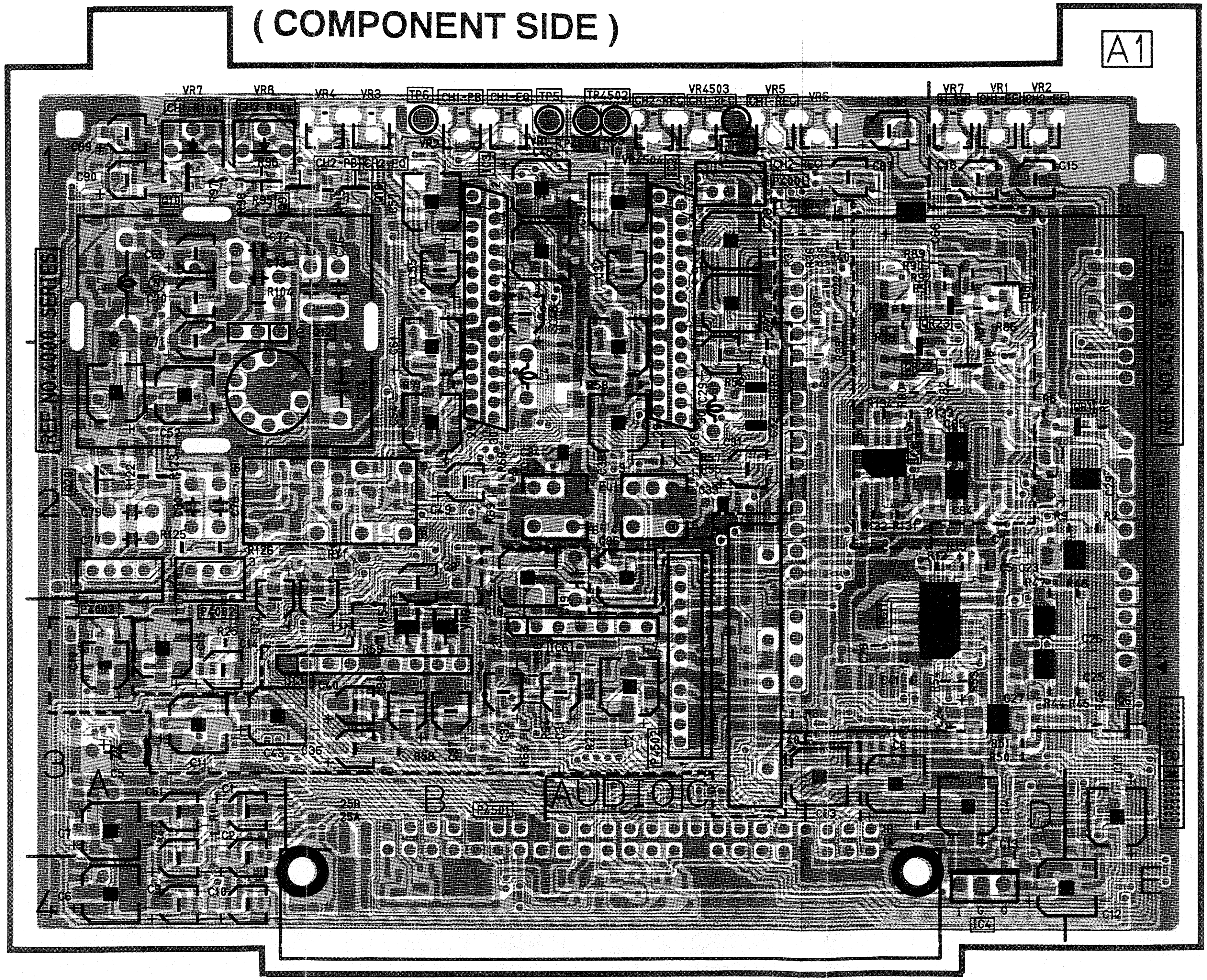
Adjustment	
VR2001	A-4
VR2002	A-4
VR2003	A-4
VR2004	A-3
VR2005	A-3
VR2006	A-3

Connector	
P2001	C-4
P2301	A-2
P2302	E-3
P2501	G-5
P2901	F-5
P6001	H-3
P6002	E-1
P6003	F-2
P6004	H-2
P6005	E-1
P6006	F-1
P6007	H-1
P6008	C-1

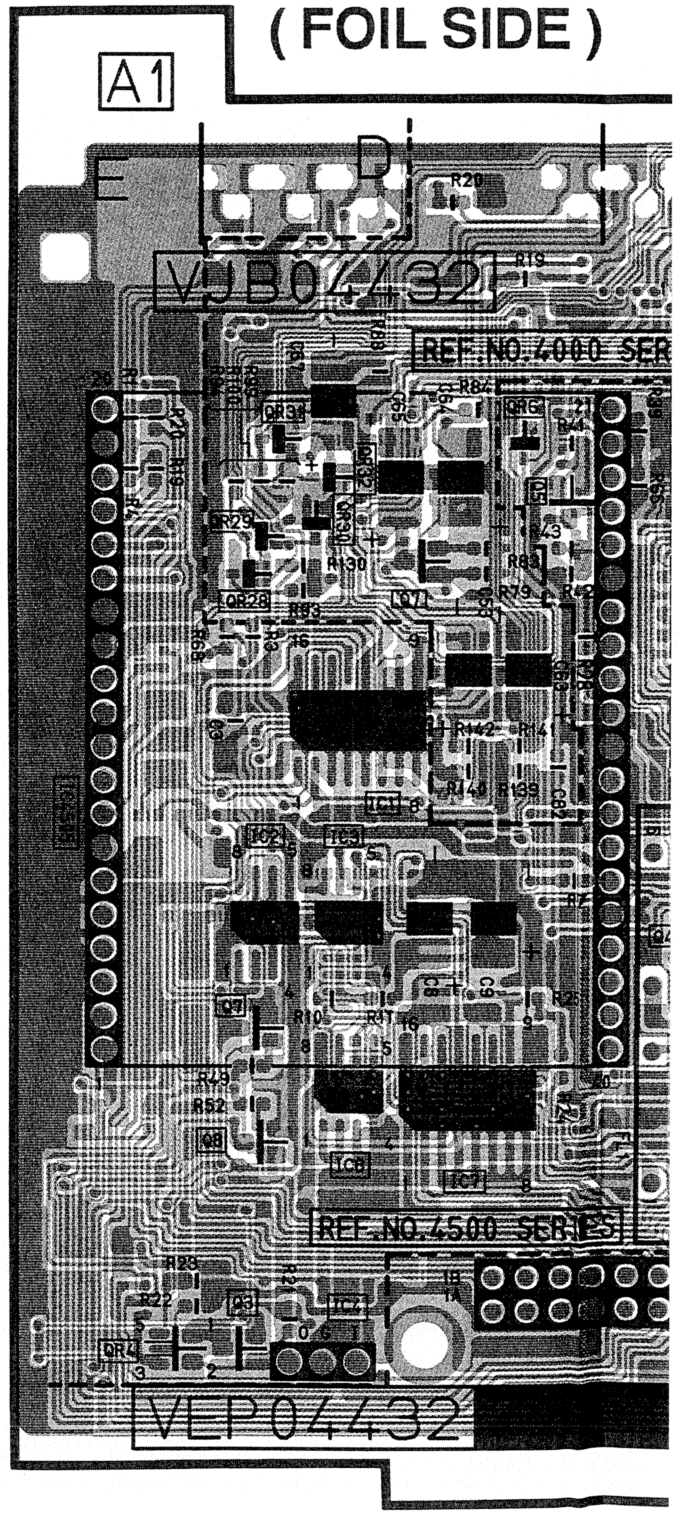
ADDRESS INFORMATION

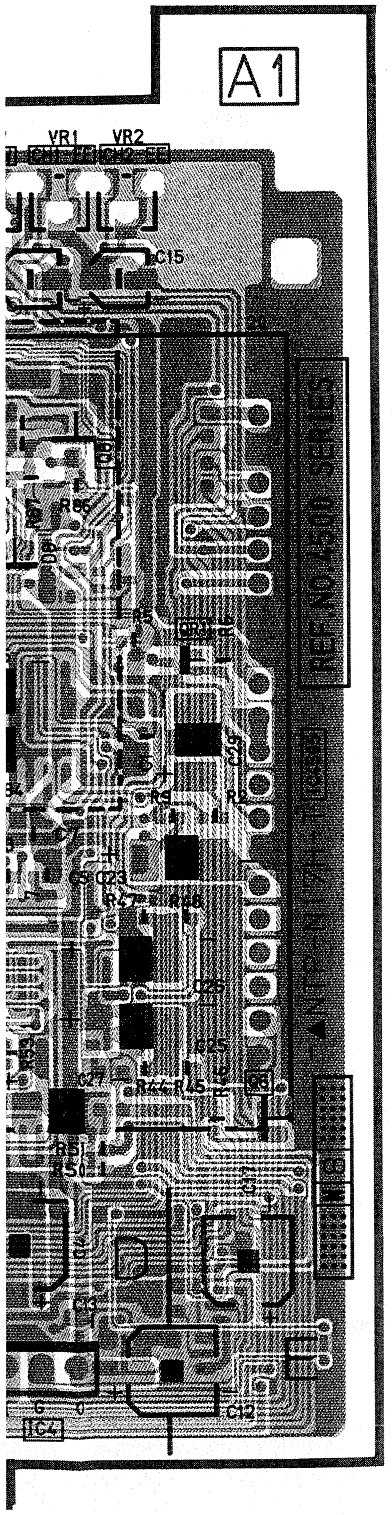
AUDIO C.B.A. (VEP04432A)

(COMPONENT SIDE)

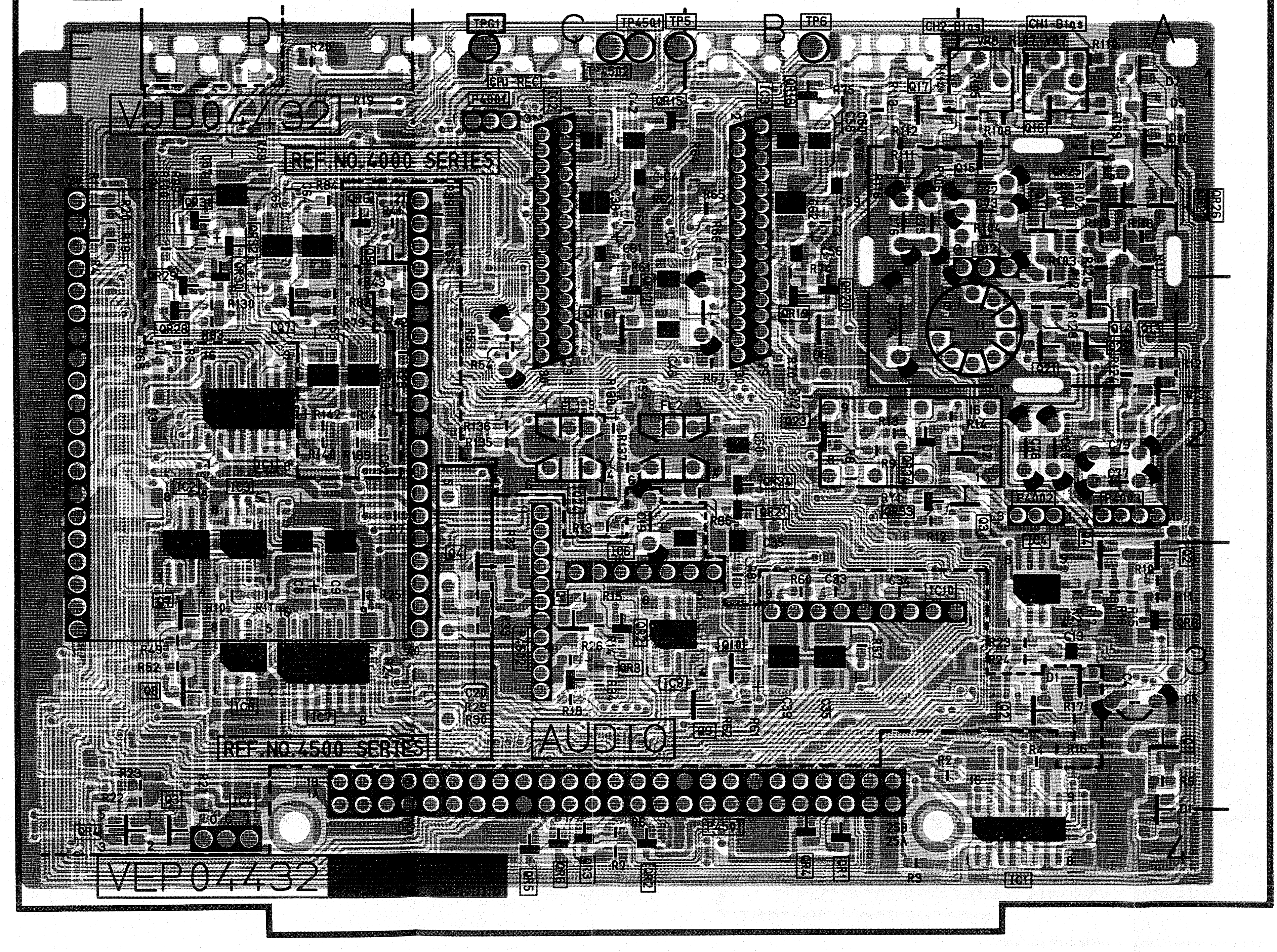

A1
VR7
VR8
VR4
VR3
TP6
TP5
TP4502
VR4503
VR5
VR6
VR1
VR2
CH1-Bias
CH2-Bias
CH1-PB
CH1-EQ
CH2-REC
CH1-REC
CH2-PB
CH2-EQ
CH1-EE
CH2-EE
REF.NO.4000 SERIES
REF.NO.4500 SERIES
AUDIO C
1
2
3
4
A
B
C
D
E
P4001
P4002
P4003
P4501
IC4
C12
C15
R125
R126

(FOIL SIDE)


A1
D
E
VJB04432
VEP04432
REF.NO.4000 SER
REF.NO.4500 SERIES
R20
R19
IC1
IC2
IC3
IC6
IC7
R10
R11
R22
R23
R52


A1
VR1
VR2
CH1-EE
CH2-EE
C15
REF.NO.4500 SERIES
IC4
C12

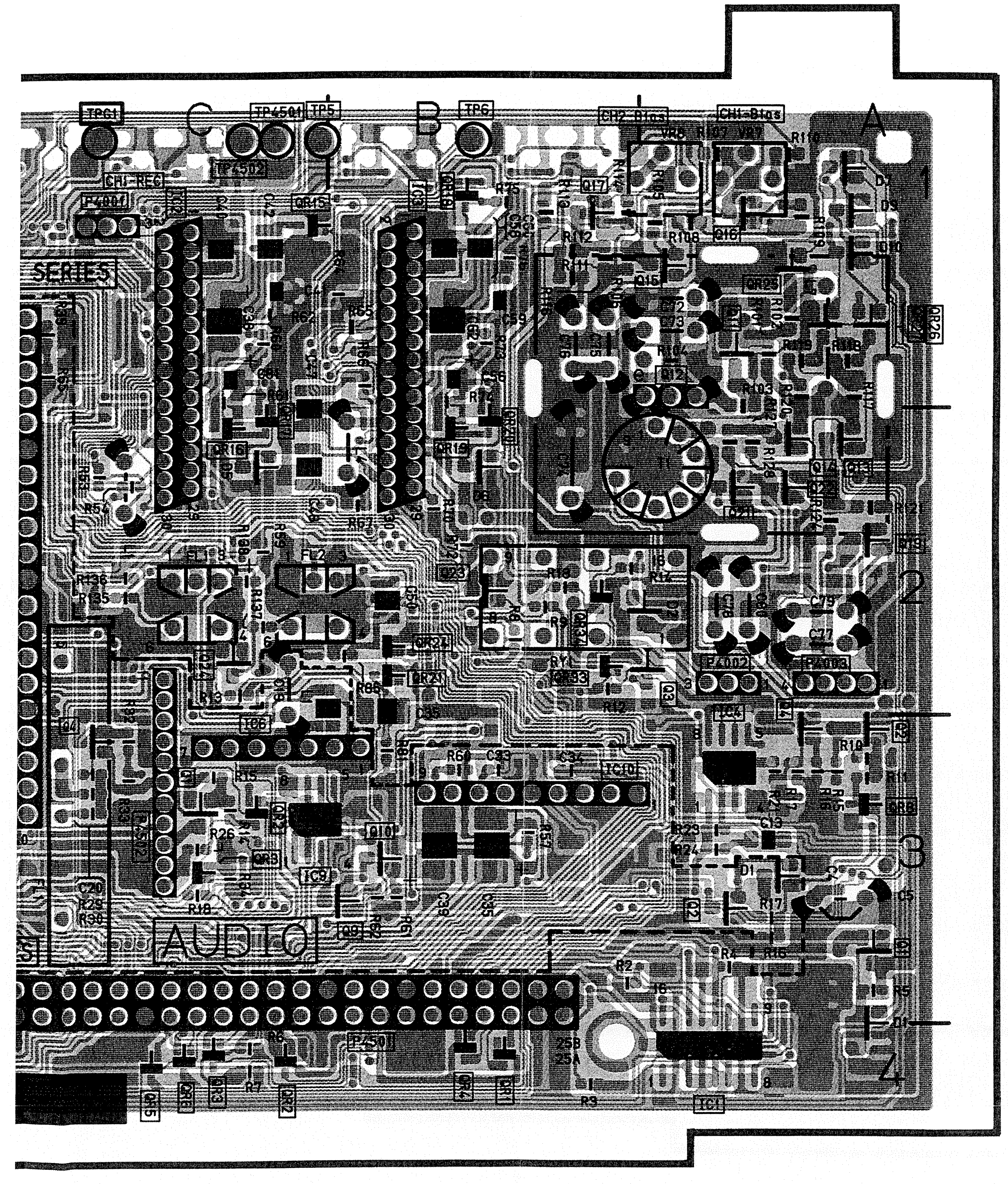
(FOIL SIDE)


A1
A
B
C
D
E
1
2
3
4
TP61
TP4501
TP5
TP6
CH2-Bias
CH1-Bias
CH1-REC
VJB04432
REF.NO.4000 SERIES
REF.NO.4500 SERIES
AUDIO
VLP04432
IC1
IC7
IC8
IC9
IC10

FOIL SIDE

Transistor	
Q4001	A-3
Q4002	A-3
Q4003	A-2
Q4004	A-3
Q4007	D-2
Q4011	A-1
Q4012	A-1
Q4013	A-2
Q4014	A-2
Q4015	A-1
Q4016	A-1
Q4017	B-1
Q4019	A-2
Q4021	A-2
Q4022	A-2
Q4023	B-2
Q4024	C-2
Q4501	C-3
Q4502	A-3
Q4503	D-4
Q4504	C-3
Q4505	D-1
Q4507	D-3
Q4508	D-3
Q4509	B-3
Q4510	B-3
Transistor & Resistor	
QR4001	B-4
QR4002	C-4
QR4003	C-4
QR4004	B-4
QR4005	C-4
QR4006	C-4
QR4008	A-3
QR4015	C-1
QR4016	C-2
QR4017	C-2
QR4018	B-1

ADDRESS INFORMATION



FOIL SIDE

AUDIO 1

Transistor	
Q4001	A-3
Q4002	A-3
Q4003	A-2
Q4004	A-3
Q4007	D-2
Q4011	A-1
Q4012	A-1
Q4013	A-2
Q4014	A-2
Q4015	A-1
Q4016	A-1
Q4017	B-1
Q4019	A-2
Q4021	A-2
Q4022	A-2
Q4023	B-2
Q4024	C-2
Q4501	C-3
Q4502	A-3
Q4503	D-4
Q4504	C-3
Q4505	D-1
Q4507	D-3
Q4508	D-3
Q4509	B-3
Q4510	B-3

Transistor & Resistor	
QR4001	B-4
QR4002	C-4
QR4003	C-4
QR4004	B-4
QR4005	C-4
QR4006	C-4
QR4008	A-3
QR4015	C-1
QR4016	C-2
QR4017	C-2
QR4018	B-1
QR4019	B-2
QR4020	B-2
QR4021	B-2
QR4024	B-2
QR4025	A-1
QR4026	A-1
QR4027	A-1
QR4028	D-2
QR4029	D-2
QR4030	D-2
QR4031	D-1
QR4032	D-1
QR4033	B-2
QR4034	B-2
QR4502	C-3
QR4503	C-3
QR4504	E-1
QR4506	D-1

Integrated Circuit	
IC4001	A-1
IC4002	C-1
IC4003	B-1
IC4004	A-3
IC4501	D-2
IC4502	D-3
IC4503	D-3
IC4504	D-4
IC4505	D-2
IC4506	C-3
IC4507	D-3
IC4508	D-3
IC4509	C-3
IC4510	B-3

Adjustment	
VR4007	A-1
VR4008	A-1

Test Point	
TP4005	C-1
TP4006	B-1
TP4501	C-1
TP4502	C-1
TPG4001	C-1

Connector	
P4001	C-1
P4002	A-2
P4003	A-2
P4501	C-3
P4502	C-3

ADDRESS INFORMATION

COMPONENT SIDE

AUDIO 1

Transistor	
Q4009	A-1
Q4010	A-1
Q4012	B-1
Q4018	B-1
Q4020	A-2
Q4506	E-3
Q4508	D-1

Transistor & Resistor	
QR4022	D-2
QR4023	D-1
QR4501	E-2
QR4505	D-1

Integrated Circuit	
IC4002	C-1
IC4003	B-1
IC4006	D-2
IC4504	D-4
IC4506	C-3
IC4510	B-3
IC4511	D-3

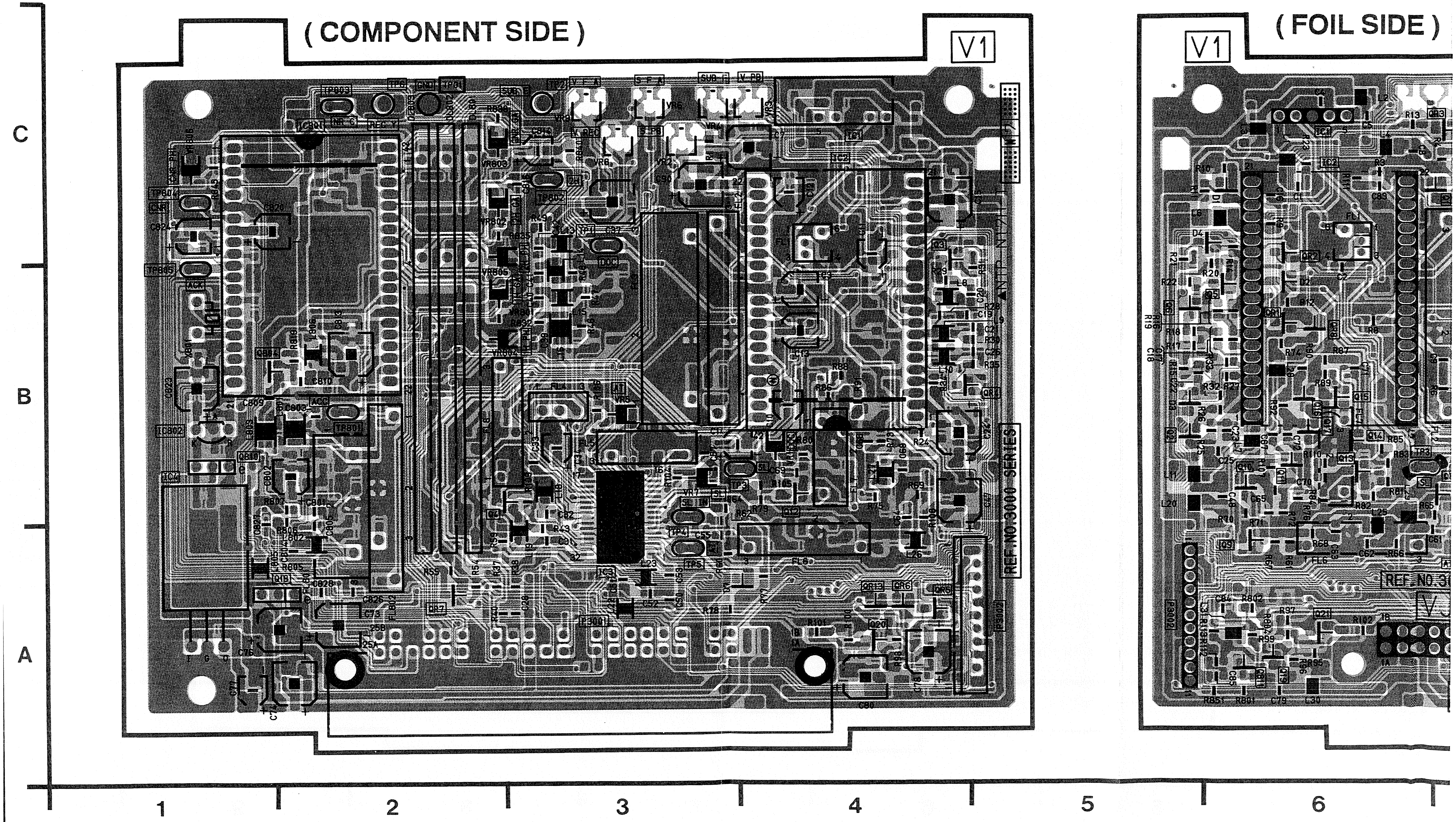
Adjustment	
VR4001	B-1
VR4002	B-1
VR4003	B-1
VR4004	B-1
VR4005	C-1
VR4006	D-1
VR4007	A-1
VR4008	A-1
VR4501	D-1
VR4502	D-1
VR4503	C-1
VR4504	C-1
VR4505	B-3
VR4506	B-3
VR4507	D-1

Test Point	
TP4005	C-1
TP4006	B-1
TP4501	C-1
TP4502	C-1
TPG4001	C-1

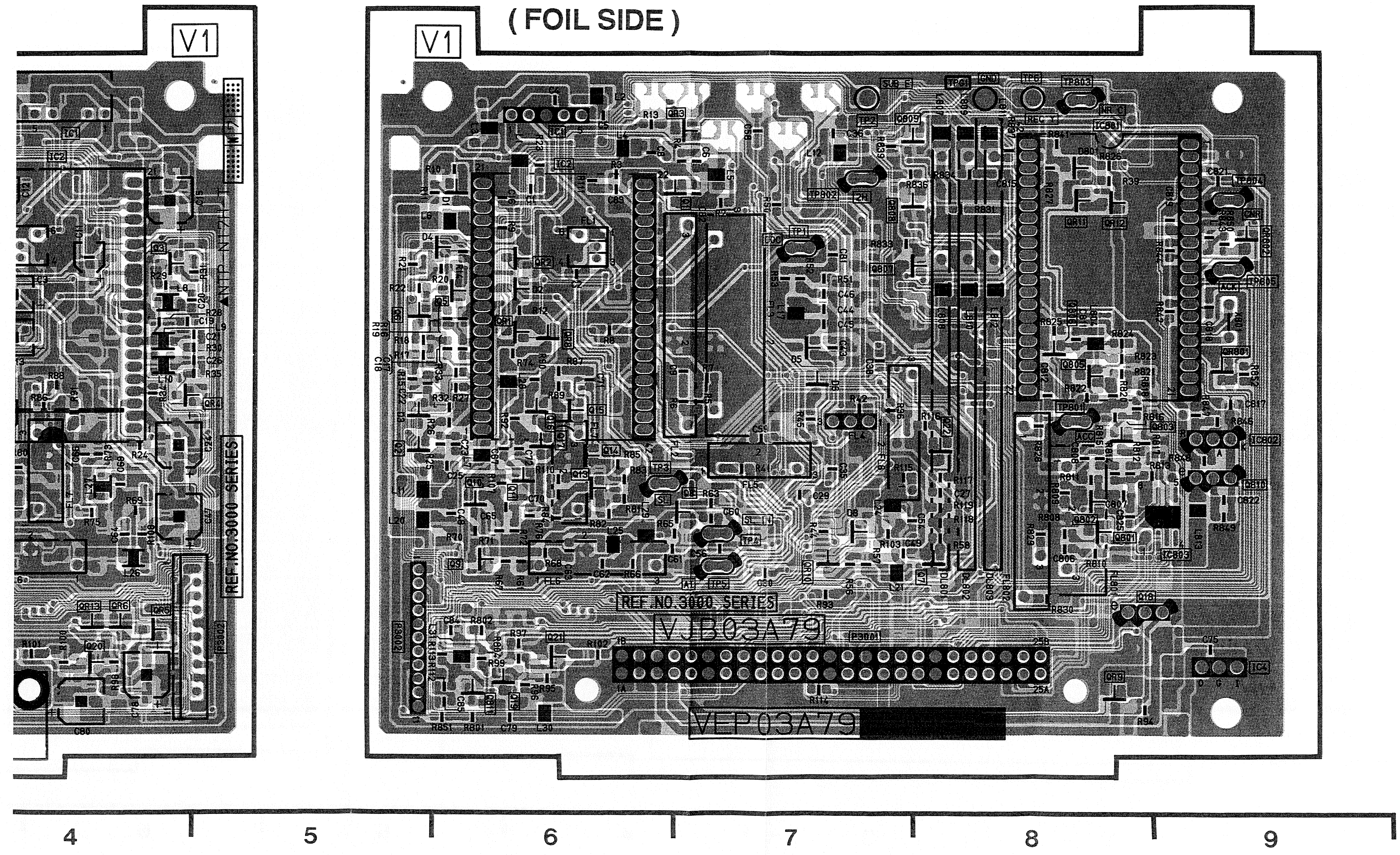
Connector	
P4001	C-1
P4002	A-2
P4003	A-3
P4501	C-3
P4502	C-3

ADDRESS INFORMATION

VIDEO (1) C.B.A. (VEP03A79A)



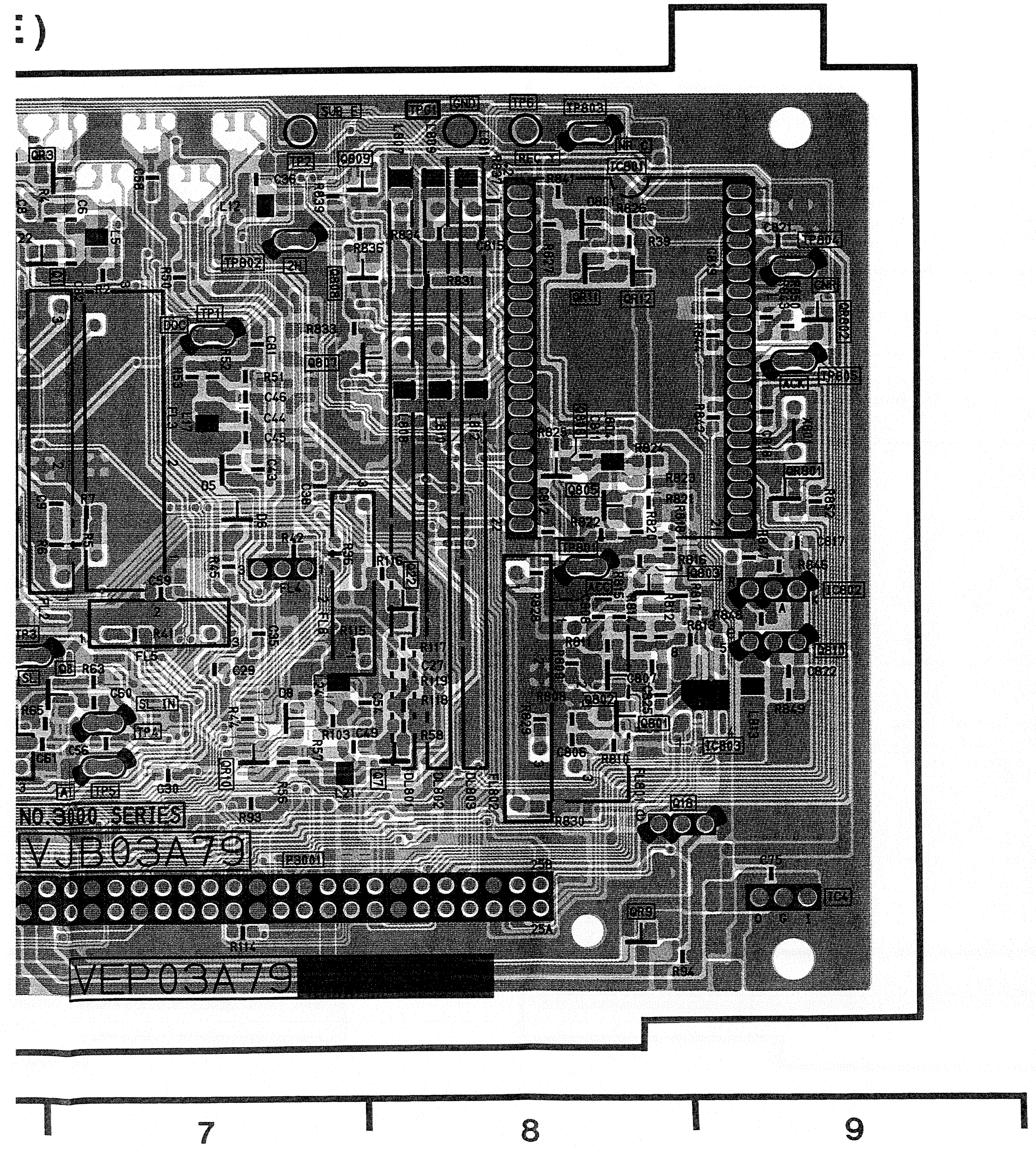
(COMPONENT SIDE)
(FOIL SIDE)
V1
V1
C
B
A
1
2
3
4
5
6
REF.NO.3000 SERIES


V1
(FOIL SIDE)
V1
REF.NO.3000 SERIES
REF.NO.3000 SERIES
VJB03A79
VEP03A79 [redacted]
4
5
6
7
8
9

COMPONENT
Transisto
Q3003 Q3004 Q3012 Q3018 Q3020 Q3804 Q3810
Transisto
QR3004 QR3005 QR3006 QR3007 QR3013
Integrate
IC3001 IC3002 IC3003 IC3004 IC3801 IC3802
Adjustmen
VR3001 VR3002 VR3003

ADDRESS IN

:)



COMPONENT SIDE

VIDEO 1

Transistor	
Q3003	C-3
Q3004	B-2
Q3012	B-4
Q3018	A-1
Q3020	A-4
Q3804	B-1
Q3810	B-1
Transistor & Resistor	
QR3004	B-5
QR3005	A-4
QR3006	A-4
QR3007	A-2
QR3013	A-4
Integrated Circuit	
IC3001	C-4
IC3002	C-2
IC3003	A-3
IC3004	B-1
IC3801	C-2
IC3802	B-1
Adjustment	
VR3001	B-4
VR3002	C-3
VR3003	C-4
VR3004	C-3
VR3005	B-3
VR3006	C-3
VR3007	B-3
VR3008	C-3
VR3009	C-3
VR3801	B-2
VR3802	C-2
VR3803	C-2
VR3804	B-2
VR3805	B-2
VR3806	C-1
Test Point	
TP3001	C-3
TP3002	C-3
TP3003	B-3
TP3004	B-3
TP3005	A-3
TP3006	C-2
TP3801	B-2
TP3802	C-3
TP3803	C-2
TP3804	C-1
TPG3001	C-2
TP GND	C-2
Connector	
P3001	A-3
P3002	A-4

ADDRESS INFORMATION

FOIL SIDE

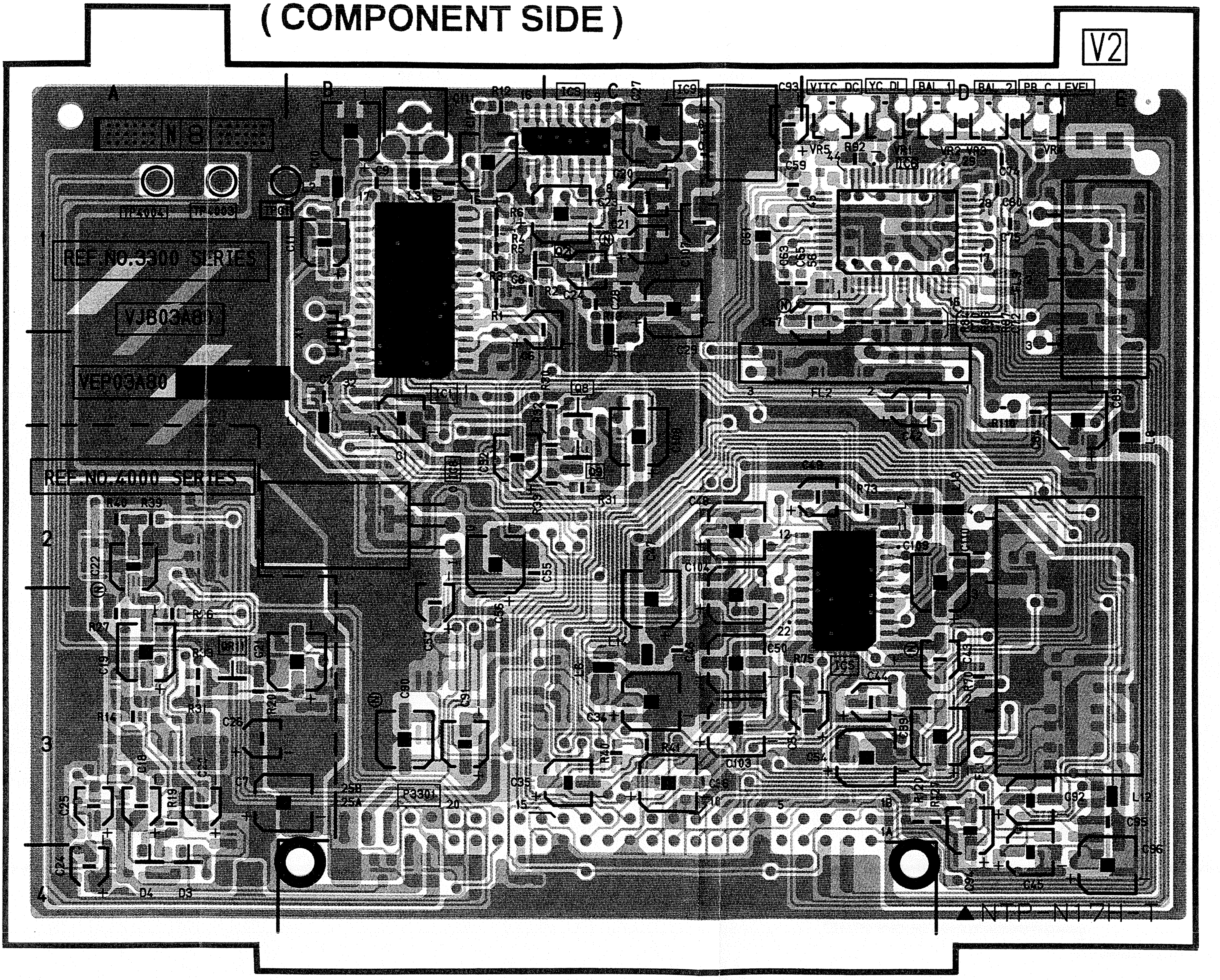
VIDEO 1

Transistor	
Q3001	C-7
Q3002	B-5
Q3005	B-6
Q3006	B-5
Q3007	A-8
Q3008	B-7
Q3009	A-6
Q3010	B-6
Q3011	B-6
Q3013	B-6
Q3014	B-6
Q3015	B-6
Q3016	B-6
Q3017	B-6
Q3018	A-8
Q3019	A-6
Q3021	A-6
Q3022	B-8
Q3801	B-8
Q3802	B-8
Q3803	B-8
Q3805	B-8
Q3806	B-8
Q3807	C-7
Q3808	C-7
Q3809	C-7
Q3810	B-9
Q3811	A-6
Transistor & Resistor	
QR3001	B-6
QR3002	C-6
QR3003	C-7
QR3008	B-6
QR3009	A-8
QR3010	A-7
QR3011	C-8
QR3012	C-8
QR3801	B-9
QR3802	C-9
Integrated Circuit	
IC3001	C-6
IC3002	C-6
IC3004	A-9
IC3801	C-8
IC3802	B-9
IC3803	B-9
Test Point	
TP3001	C-7
TP3002	C-7
TP3003	B-6
TP3004	B-7
TP3005	A-7
TP3006	C-8
TP3801	B-8
TP3802	C-7
TP3803	C-8
TP3804	C-9
TP3805	B-9
TPG3001	C-8
TP GND	C-8
Connector	
P3001	A-7
P3002	A-5

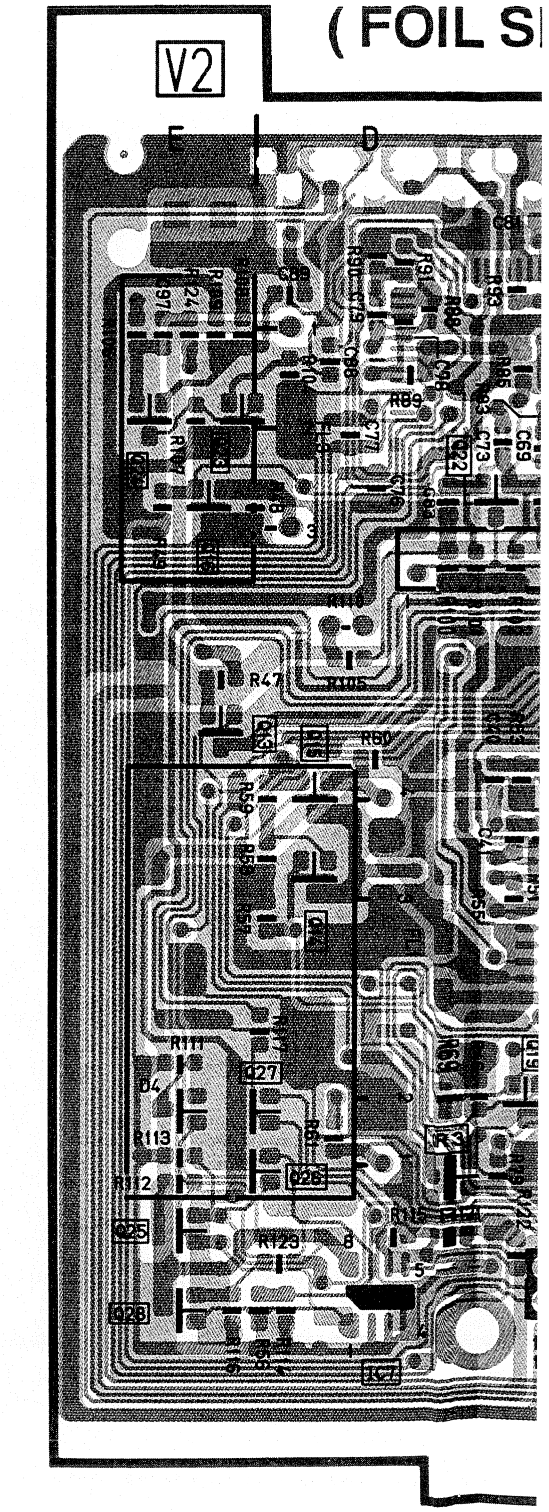
ADDRESS INFORMATION

VIDEO (2) C.B.A. (VEP03A80A)

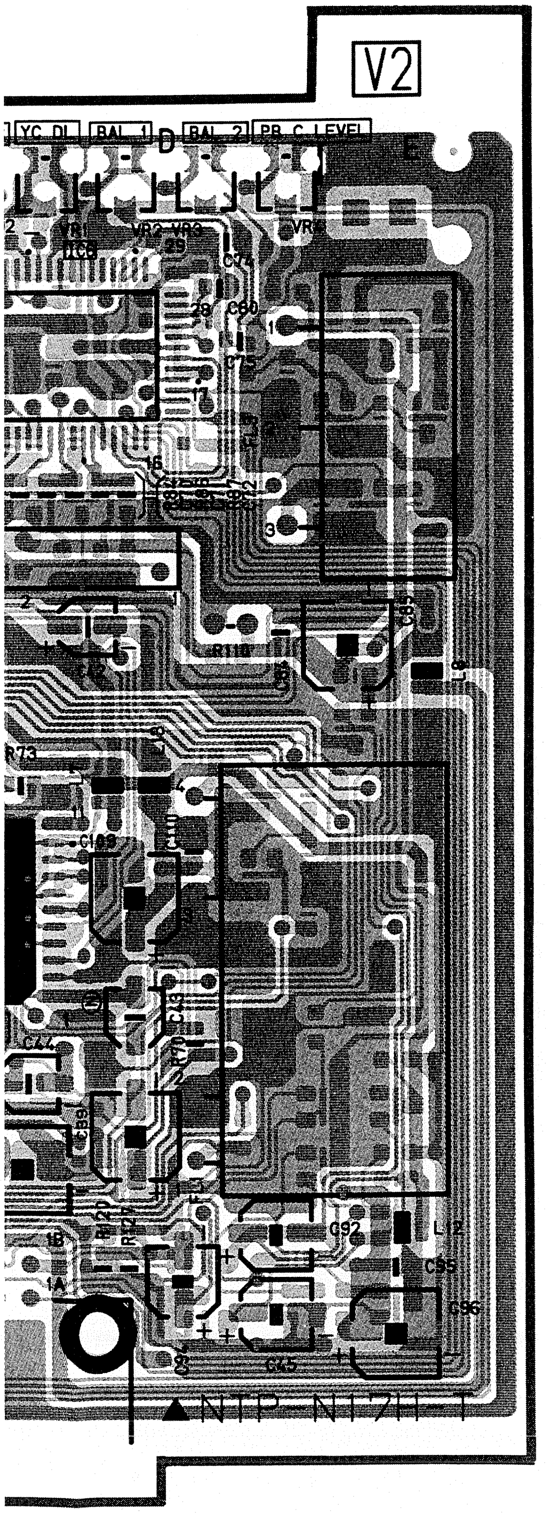
(COMPONENT SIDE)

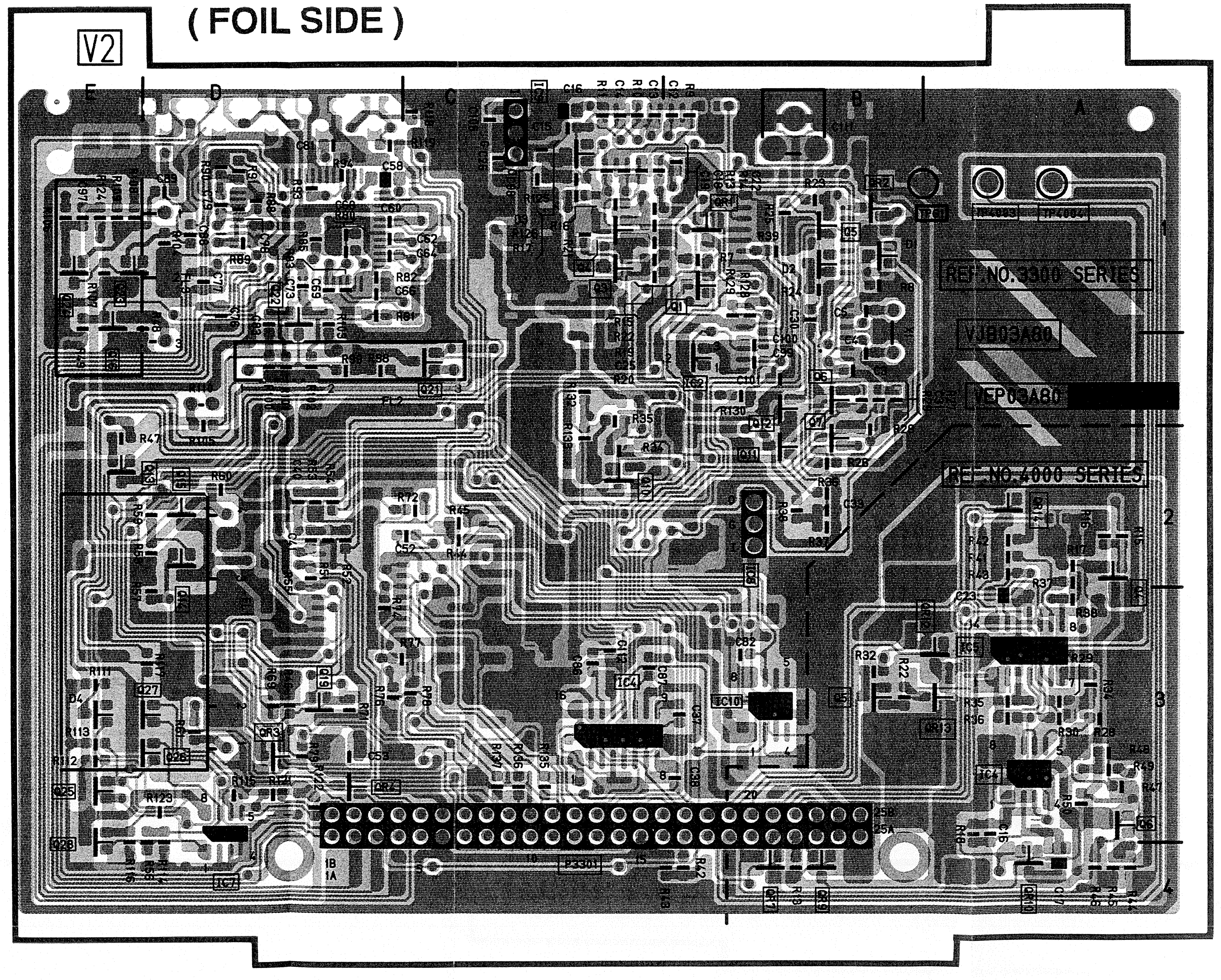

V2
A
B
C
D
E
1
2
3
4
REF.NO.3300 SERIES
VJB03A80
VEP03A80
REF.NO.4000 SERIES
VITC DC
YC DL
BAL 1
BAL 2
PB C LEVEL
IC3
IC9
IC1
IC5
FL2
P3301
C93
R12
R73
R75
C102
C103
C55
D4
D3
L12
C95
C96
▲NTP-N12H-1

(FOIL SI

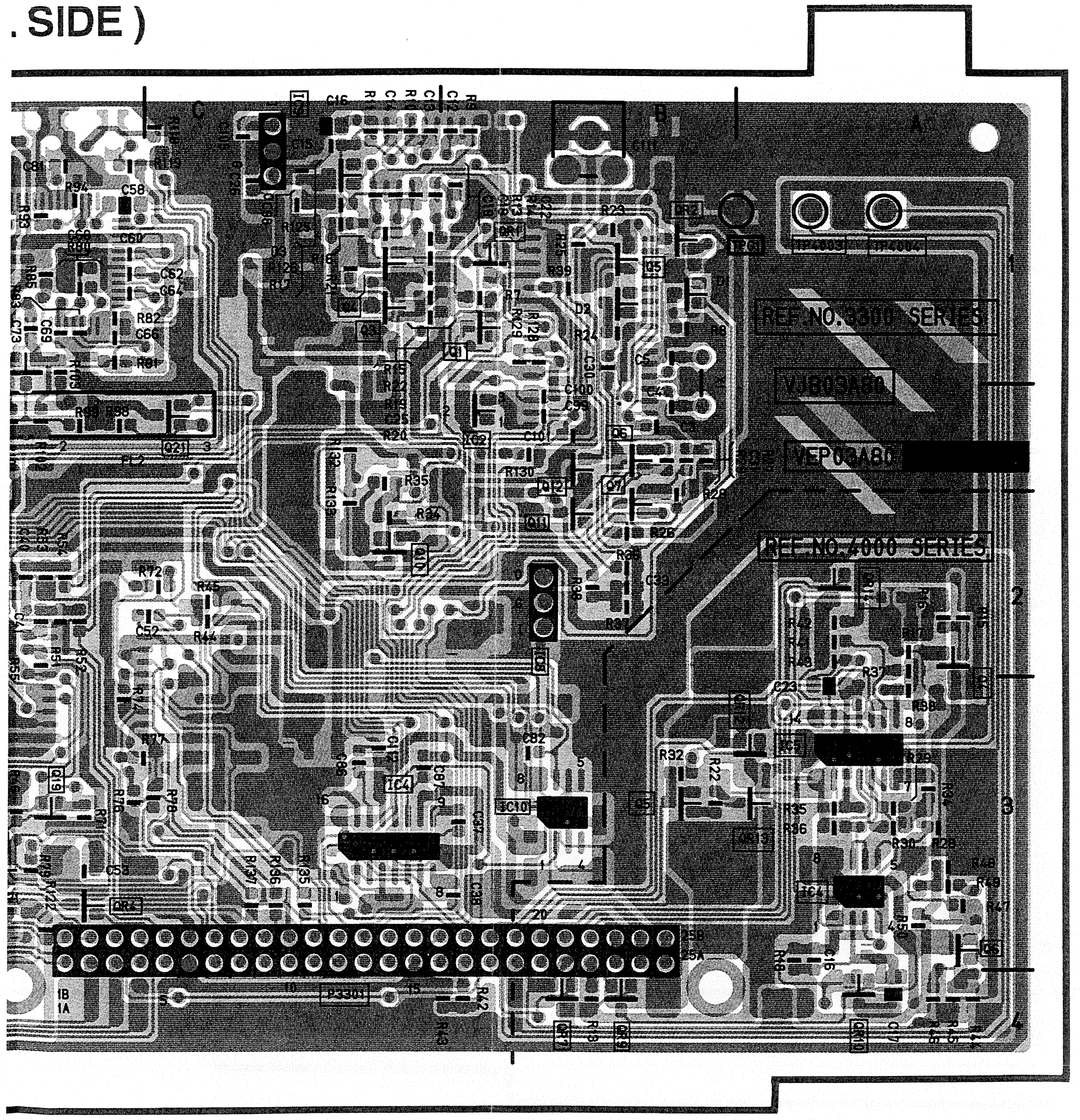

V2
E
D
R47
R80
R59
R111
Q27
D4
R113
R112
Q25
R123
Q26
IC7

2 C.B.A. **VIDEO 1 C.B.A.**


V2
YC DL
BAL 1
BAL 2
PB C LEVEL
D
E
NTP-N17H-T


(FOIL SIDE)
V2
E
D
C
B
A
1
2
3
4
REF NO.3300 SERIES
VJB03A80
VEP03A80
REF NO.4000 SERIES
P3301

. SIDE)



COMPONENT SIDE

VIDEO 2	
Transistor	
Q3302	C-1
Q3308	C-2
Q3309	C-2
Transistor & Resistor	
QR4011	A-3
Integrated Circuit	
IC3301	B-2
IC3303	C-1
IC3305	D-3
IC3306	D-1
IC3308	B-2
IC3309	C-1
Test Point	
TP4003	A-1
TP4004	A-1
TPG4001	A-1
Adjustment	
VR3301	D-1
VR3302	D-1
VR3303	D-1
VR3304	D-1
VR3305	D-1
Connector	
P3301	C-4

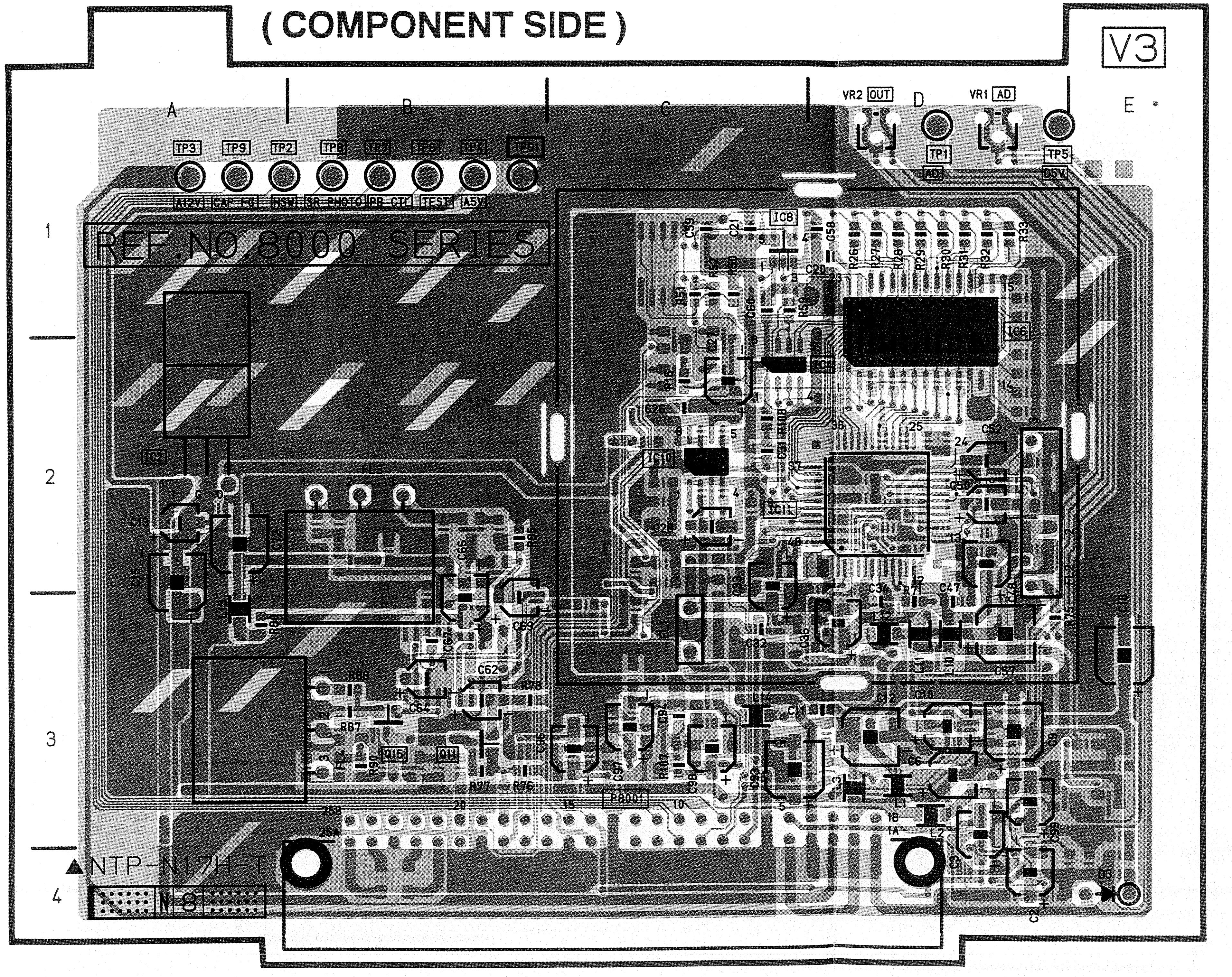
ADDRESS INFORMATION

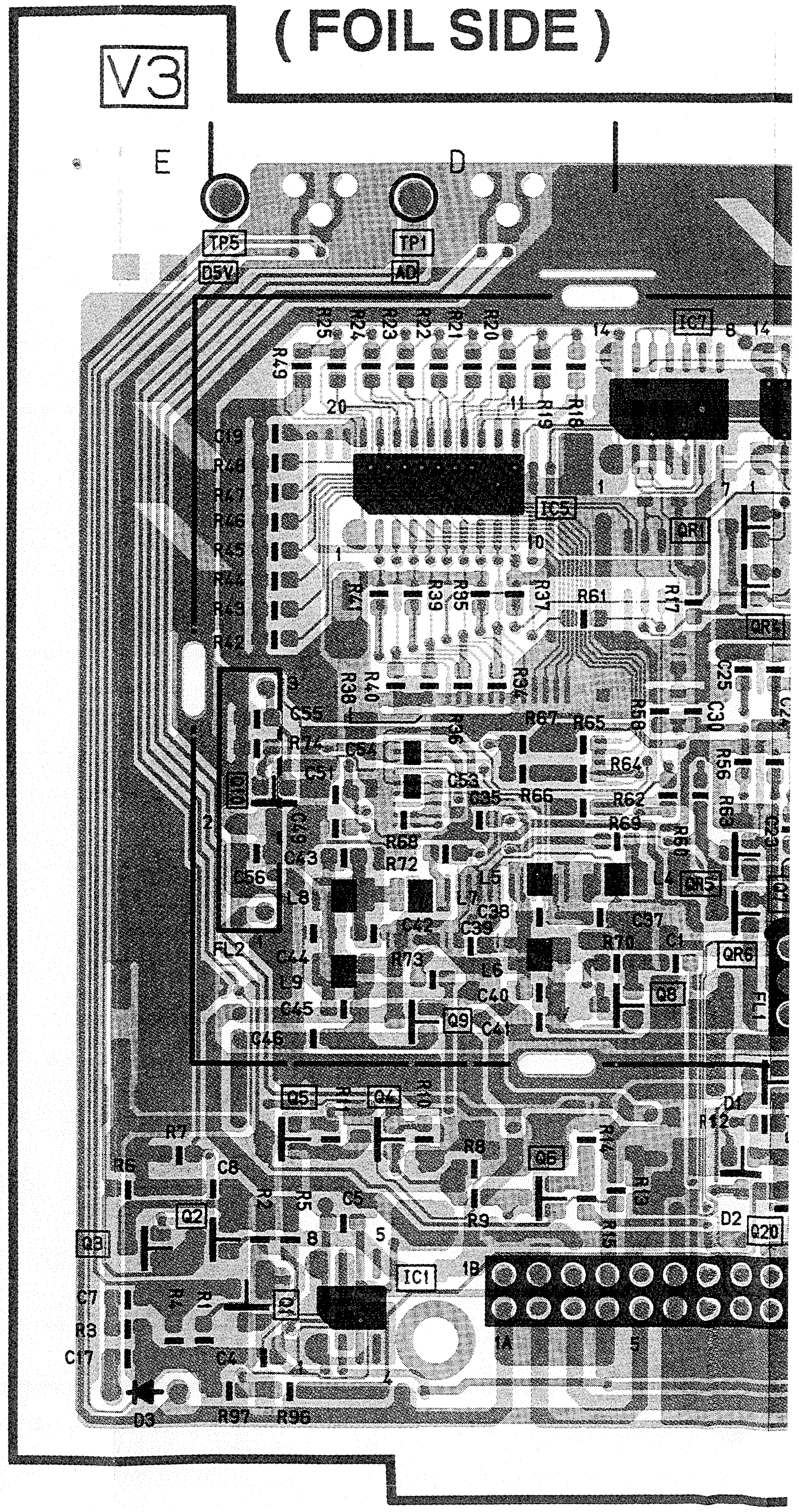
FOIL SIDE

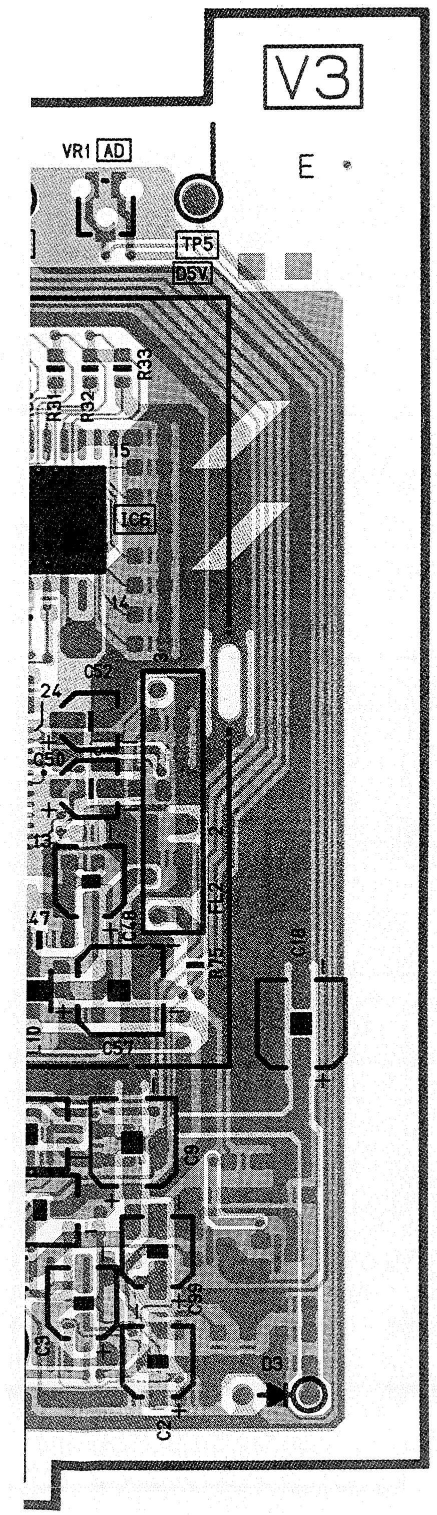
VIDEO 2	
Transistor	
Q3301	B-1
Q3303	C-1
Q3304	C-1
Q3305	B-1
Q3306	B-2
Q3307	B-2
Q3310	C-2
Q3311	B-2
Q3312	B-2
Q3313	D-2
Q3314	D-3
Q3315	D-2
Q3316	E-2
Q3319	D-3
Q3321	C-2
Q3322	D-1
Q3323	E-1
Q3324	E-1
Q3325	E-3
Q3326	D-3
Q3327	D-3
Q3328	E-4
Q4004	A-3
Q4005	B-3
Q4006	A-3
Transistor & Resistor	
QR3301	B-1
QR3302	B-1
QR3303	D-3
QR3304	D-3
QR4007	B-4
QR4009	B-4
QR4010	A-4
QR4012	A-3
QR4013	A-3
QR4014	A-2
Integrated Circuit	
IC3304	C-3
IC3307	D-4
IC3308	B-2
IC3310	B-3
IC4004	A-3
IC4005	A-3
Test Point	
TP4003	A-1
TP4004	A-1
TPG3301	A-1
Connector	
P3301	C-4

ADDRESS INFORMATION

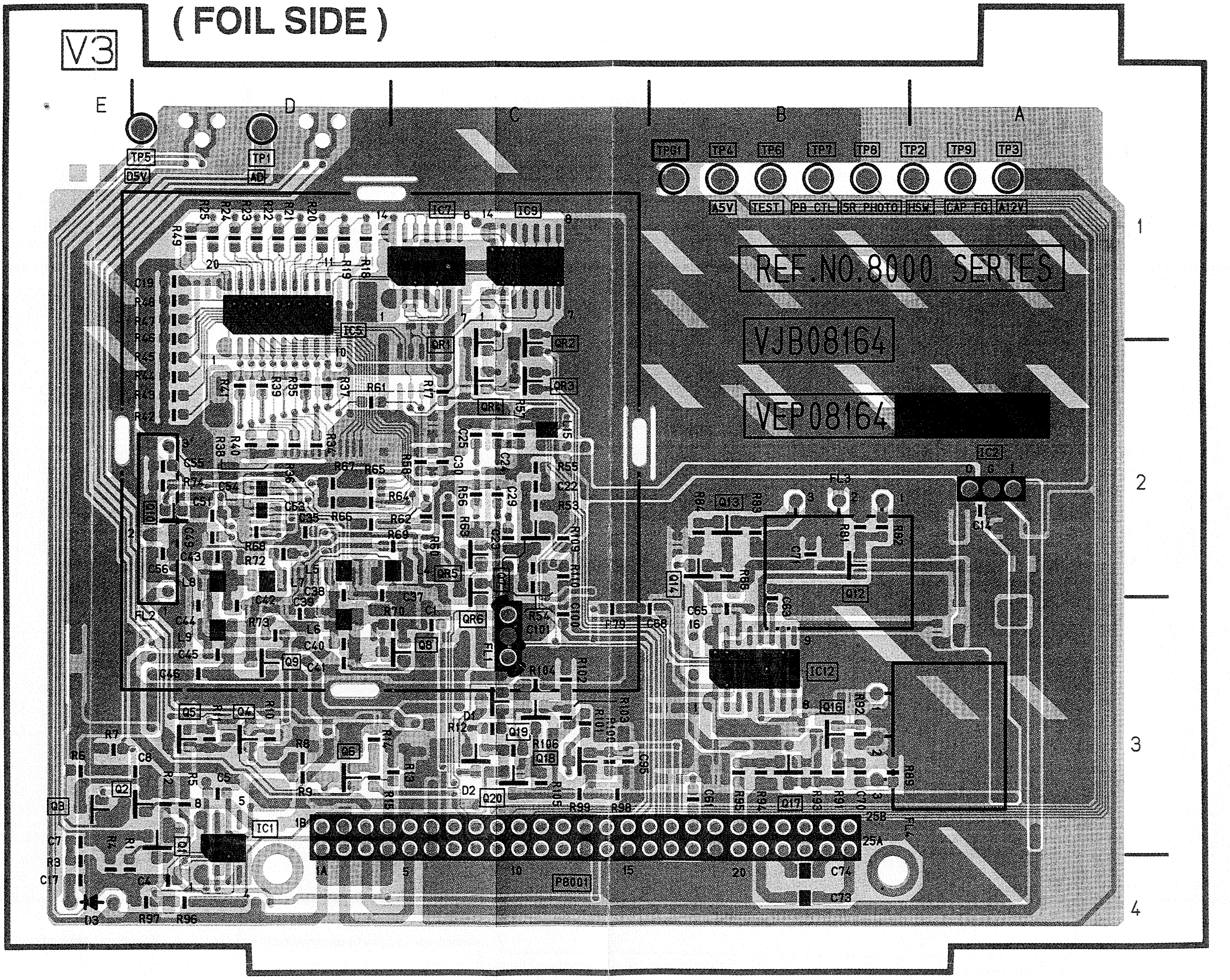
VIDEO (3) C.B.A. (VEP08164A)


(COMPONENT SIDE)
V3
A
B
C
D
E
1
2
3
4
VR2 OUT
VR1 AD
TP3
TP9
TP2
TP8
TP7
TP6
TP4
TP1
TP5
A12V
CAP FG
HSW
SR PMOTO
PB CTL
TEST
A5V
AD
D5V
REF.NO 8000 SERIES
IC2
IC6
IC8
IC10
IC11
FL2
P8001
NTP-N17H-T
N8
D3


(FOIL SIDE)
V3
E
D
TP5
D5V
TP1
AD
IC5
IC7
IC1
FL1
FL2
D3
R97
R96


V3
VR1 AD
E
TP5
D5V
IC6
Q18
D3

(FOIL SIDE)


V3
E
D
C
B
A
1
2
3
4
TP5
D5V
TP1
AD
TP01
TP4
TP6
TP7
TP8
TP2
TP9
TP3
A5V
TEST
PB CTL
SR PHOTO
HSW
CAP FG
A12V
REF.NO.8000 SERIES
VJB08164
VEP08164
IC7
IC9
IC5
IC2
IC12
IC1
QR1
QR2
QR3
QR4
QR5
QR6
Q2
Q4
Q5
Q6
Q8
Q9
Q10
Q12
Q13
Q14
Q16
Q17
Q18
Q19
Q20
FL1
FL2
FL3
FL4
P8001
1A
1B
25A
25B
D1
D2
D3
C73
C74

CC

Tr

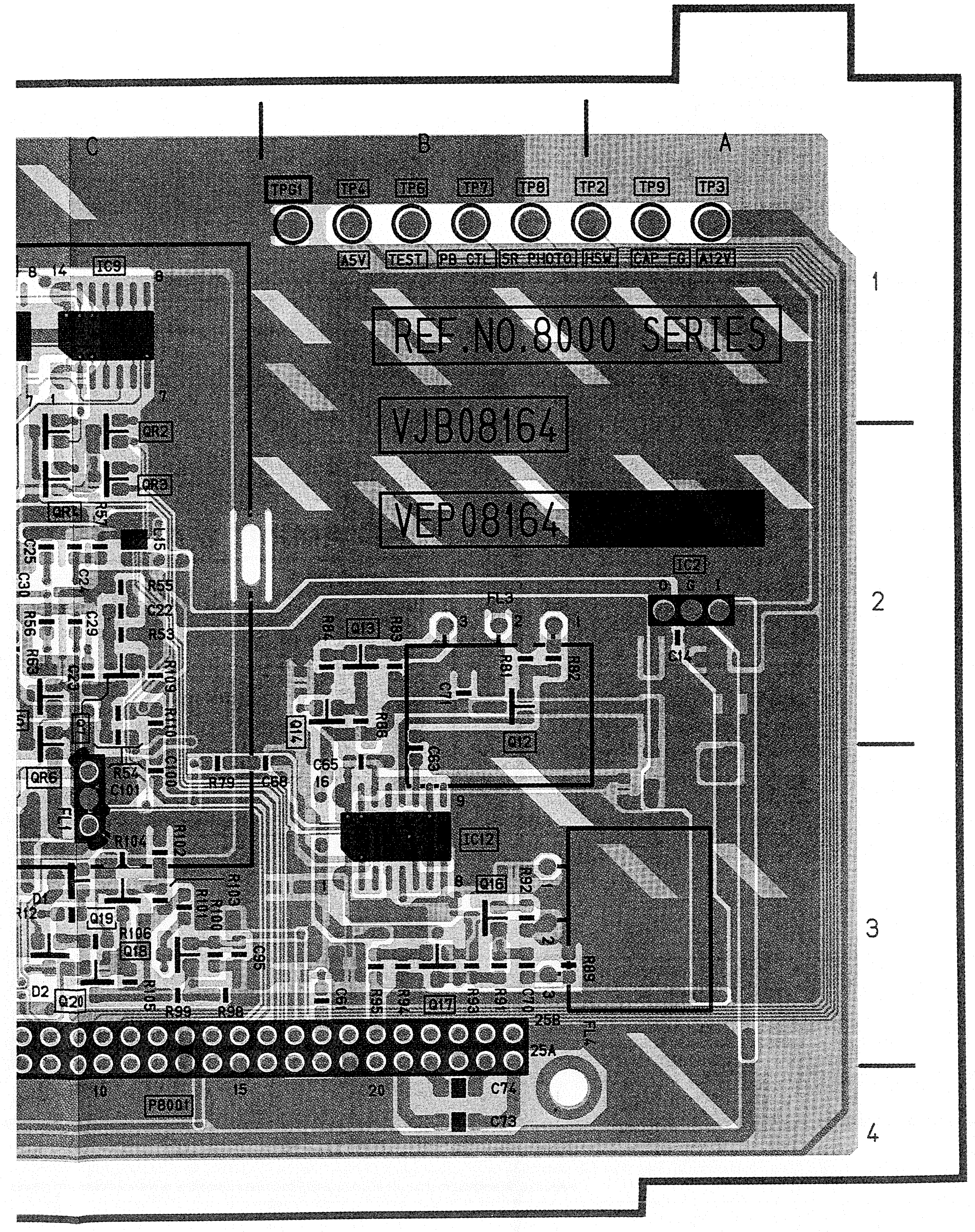
Ir

Te

Ac

Co

ADD


C
B
A
1
2
3
4
TPG1
TP4
TP6
TP7
TP8
TP2
TP9
TP3
A5V
TEST
PB CTL
SR PHOTO
R5V
CAP FG
A12V
REF.NO.8000 SERIES
VJB08164
VEP08164
IC9
IC2
IC12
QR2
QR3
QR4
QR6
Q12
Q13
Q14
Q16
Q17
Q18
Q19
Q20
FL1
FL3
FL4
D1
D2
P8001
10
15
20
25A
25B

COMPONENT SIDE

VIDEO 3	
Transistor	
Q8011	B-3
Q8015	B-3
Integrated Circuit	
IC8002	A-2
IC8004	C-2
IC8006	D-1
IC8008	C-1
IC8010	C-2
IC8011	C-2
Test Point	
TP8001	D-1
TP8002	A-1
TP8003	A-1
TP8004	B-1
TP8005	D-1
TP8006	B-1
TP8007	B-1
TP8008	B-1
TP8009	A-1
TPG8001	B-1
Adjustment	
VR8001	D-1
VR8002	D-1
Connector	
P8001	C-1

ADDRESS INFORMATION

FOIL SIDE

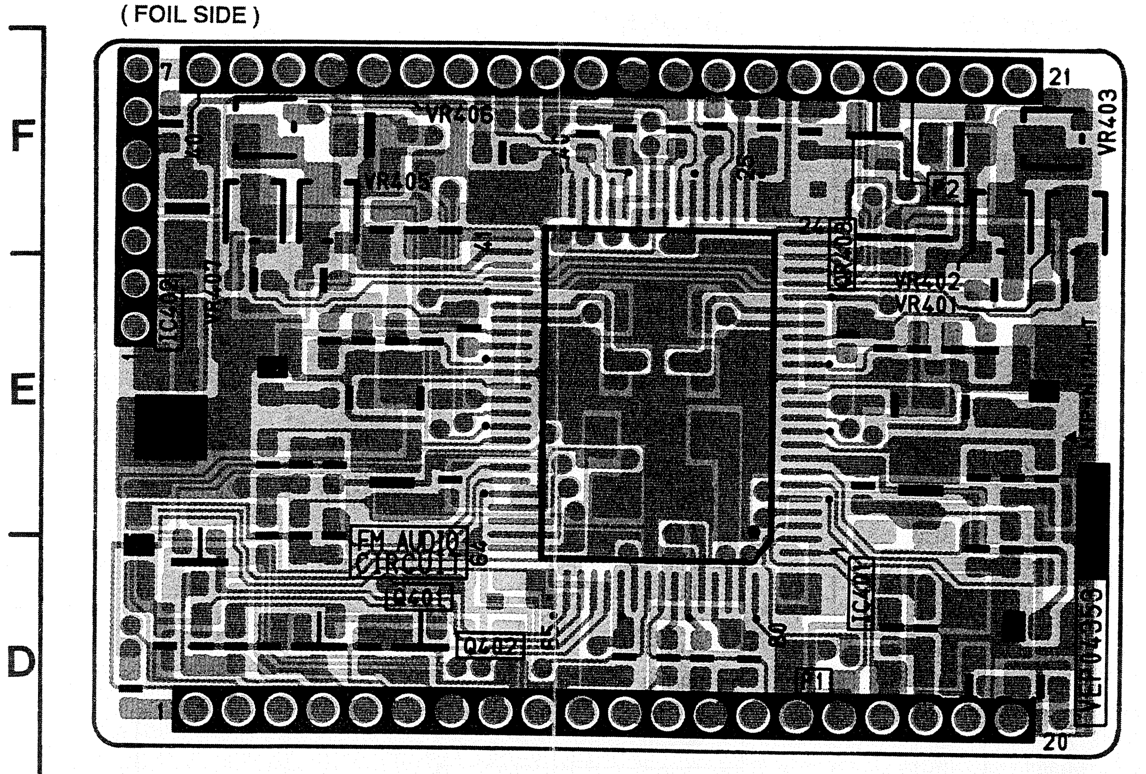
VIDEO 3			
Transistor		**Test Point**	
Q8001	D-4	TP8001	D-1
Q8002	E-3	TP8002	A-1
Q8003	E-3	TP8003	A-1
Q8004	D-4	TP8004	B-1
Q8005	D-3	TP8005	D-1
Q8006	D-4	TP8006	B-1
Q8007	C-2	TP8007	B-1
Q8008	C-3	TP8008	B-1
Q8009	D-4	TP8009	A-1
Q8010	D-2	TPG8001	B-1
Q8012	B-2	**Connector**	
Q8013	B-2	P8001	C-4
Q8014	B-2		
Q8016	B-3		
Q8017	B-3		
Q8018	C-3		
Q8019	C-3		
Q8020	C-3		
Transistor & Resistor			
QR8001	C-2		
QR8002	C-2		
QR8003	C-2		
QR8004	C-2		
QR8005	C-2		
QR8006	C-3		
Integrated Circuit			
IC8001	D-4		
IC8002	A-2		
IC8005	D-1		
IC8007	C-1		
IC8009	C-1		
IC8012	B-3		

ADDRESS INFORMATION

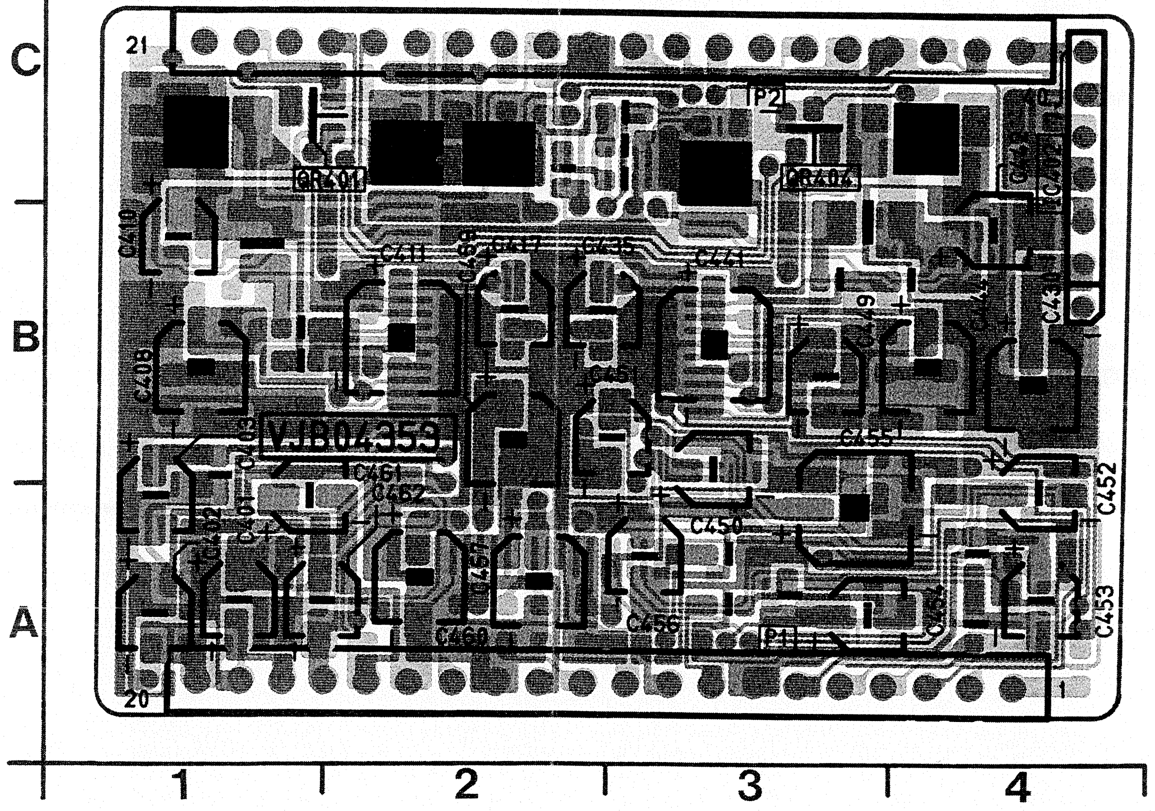
FM AUDIO PACK C.B.A. (VEP04353B)

HEAD AMP C.B.A. (VEP05162I)

(FOIL SIDE)


F
E
D
VR403
VR406
VR405
VR402
VR401
IC402
FM AUDIO CIRCUIT
Q401
Q402
QR403
VR407
VEP04353
7
21
1
20

(COMPONENT SIDE)


C
B
A
1
2
3
4
21
20
1
TP2
TP1
QR401
QR404
IC402
VJB04353
C410
C408
C411
C417
C435
C450
C451
C452
C453
C455
C456
C460
C461
C462
C419

FOIL SIDE

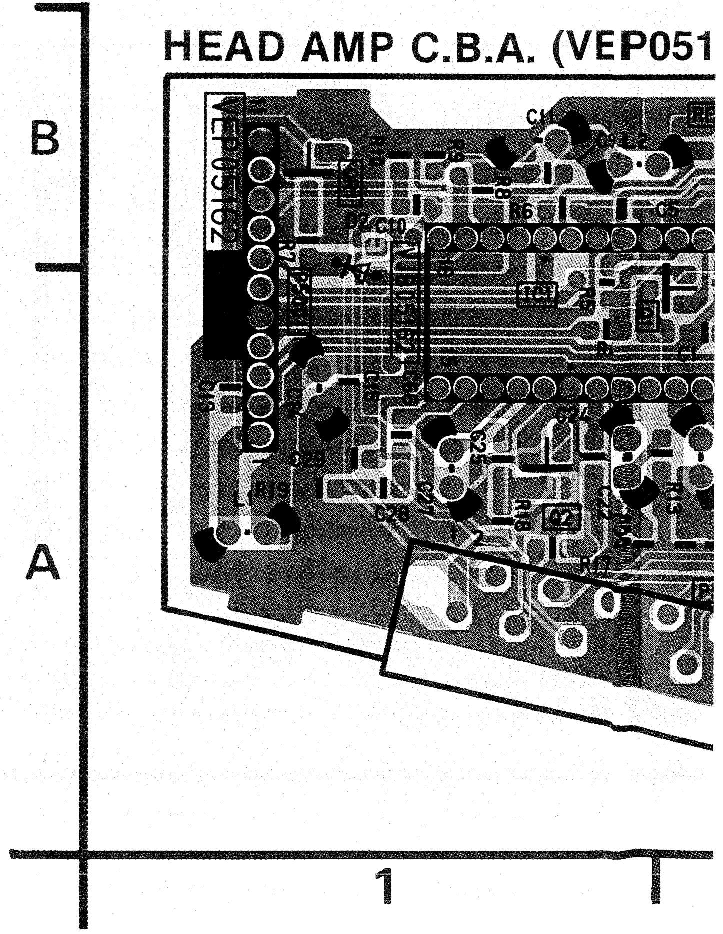
FM AUDIO	
Transistor	
Q401 Q402	D-2 D-2
Transistor & Resistor	
QR403	F-3
Integrated Circuit	
IC402	E-1
Adjustment	
VR401 VR402 VR403 VR405 VR406 VR407	E-4 E-4 F-4 F-2 F-2 E-1

ADDRESS INFORMATION

COMPONENT SIDE

FM AUDIO	
Transistor & Resistor	
QR401 QR404	C-2 C-3
Integrated Circuit	
IC402	C-4

ADDRESS INFORMATION

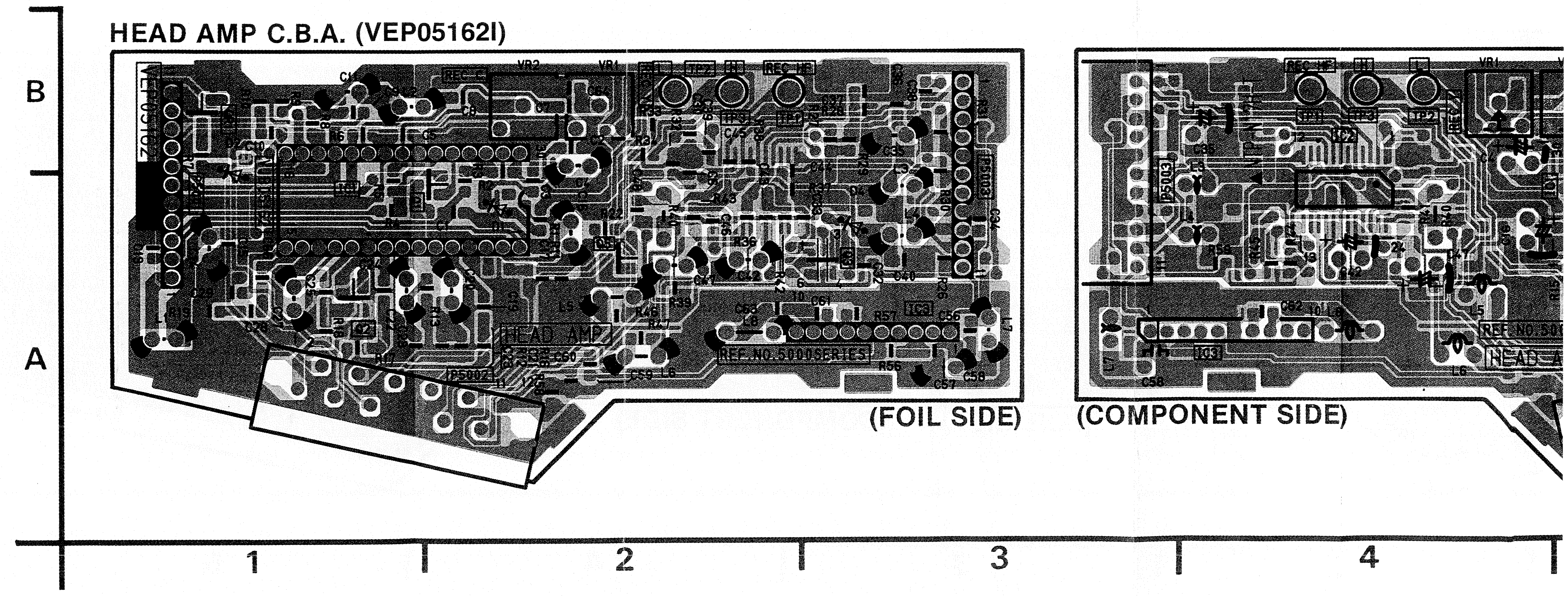

HEAD AMP C.B.A. (VEP051
B
A
1
VEP05162
Q2
R6
C5
C10
C28
C29
L1

HEAD AMP C.B.A. (VEP05162I)

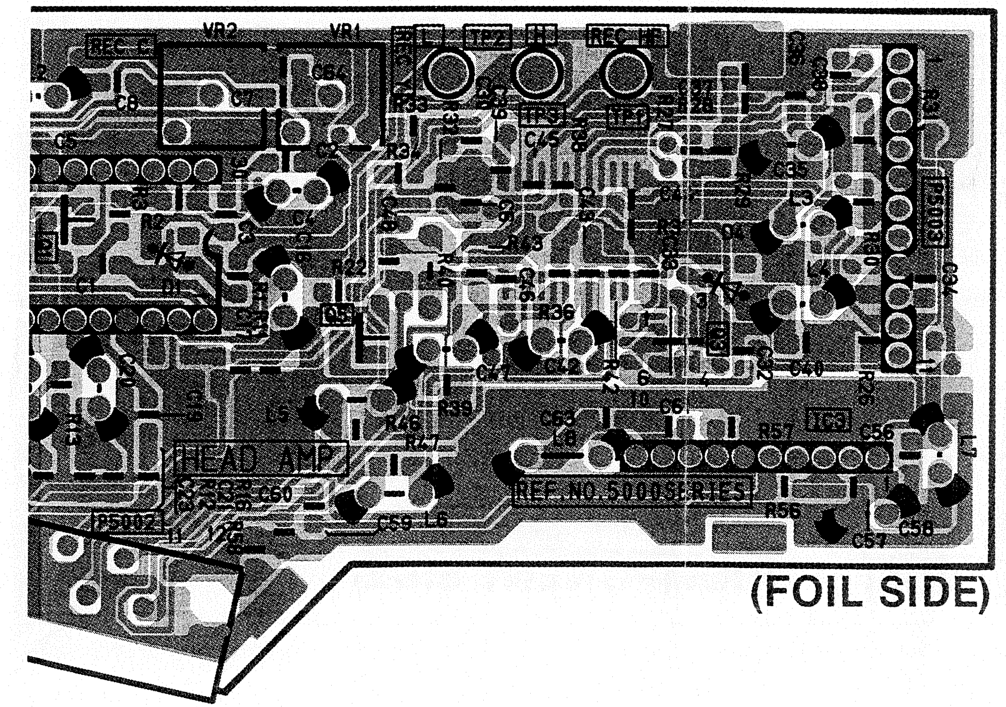
COMPONENT SIDE

FM AUDIO	
Transistor & Resistor	
QR401 QR404	C-2 C-3
Integrated Circuit	
IC402	C-4

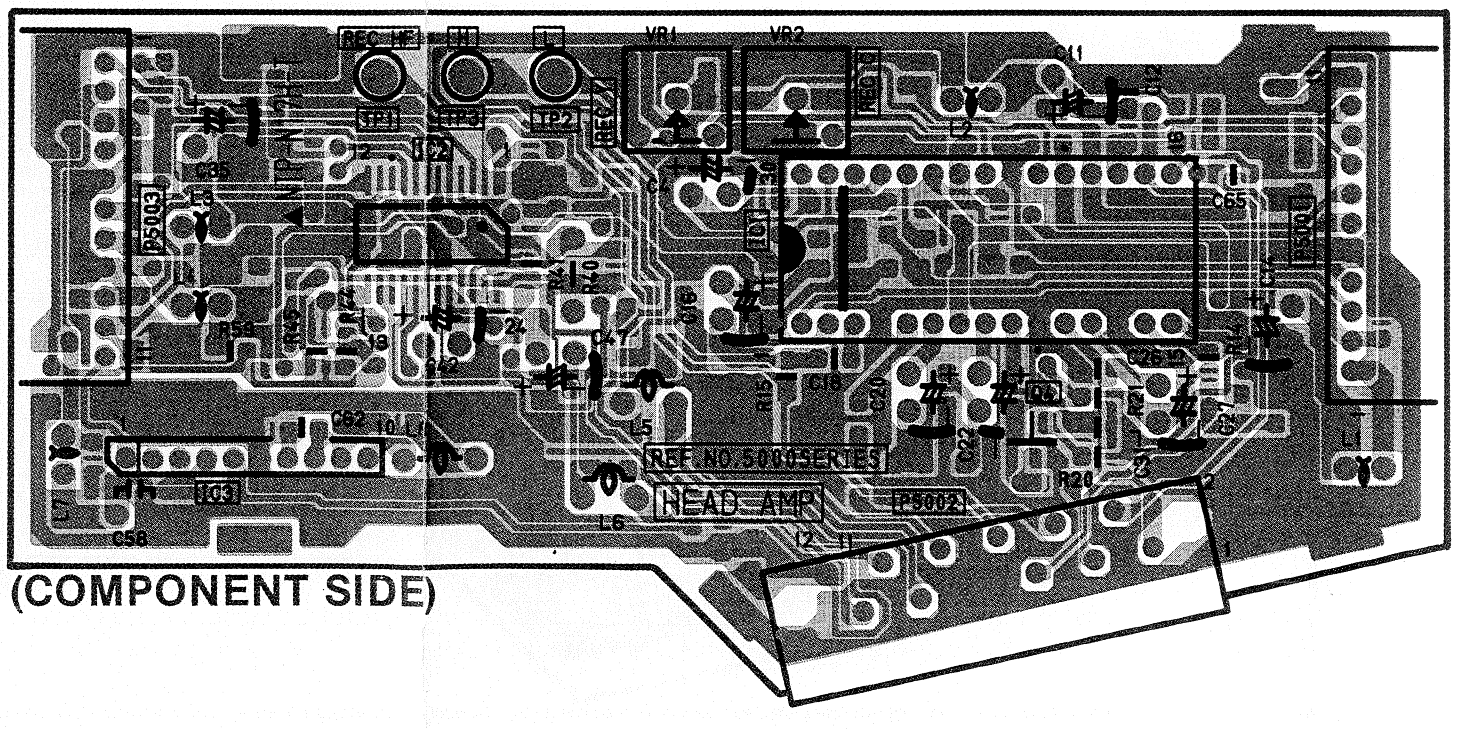
ADDRESS INFORMATION


HEAD AMP C.B.A. (VEP05162I)
B
A
1
2
3
4
(FOIL SIDE)
(COMPONENT SIDE)
HEAD AMP
REF.NO.5000SERIES
REC HF
VR1
VR2
TP1
TP2
IC3
C56
C57
C58
C59
L6
L5
R56
R57
P5002
P5003
C45

P05162I)


VR2
VR1
REC HF
TP1
TP2
TP3
HEAD AMP
REF. NO. 5000 SERIES
P5002
P5003
IC3

(FOIL SIDE)


REC HF
VR1
VR2
TP1
TP2
TP3
P5003
P5001
P5002
HEAD AMP
REF. NO. 5000 SERIES

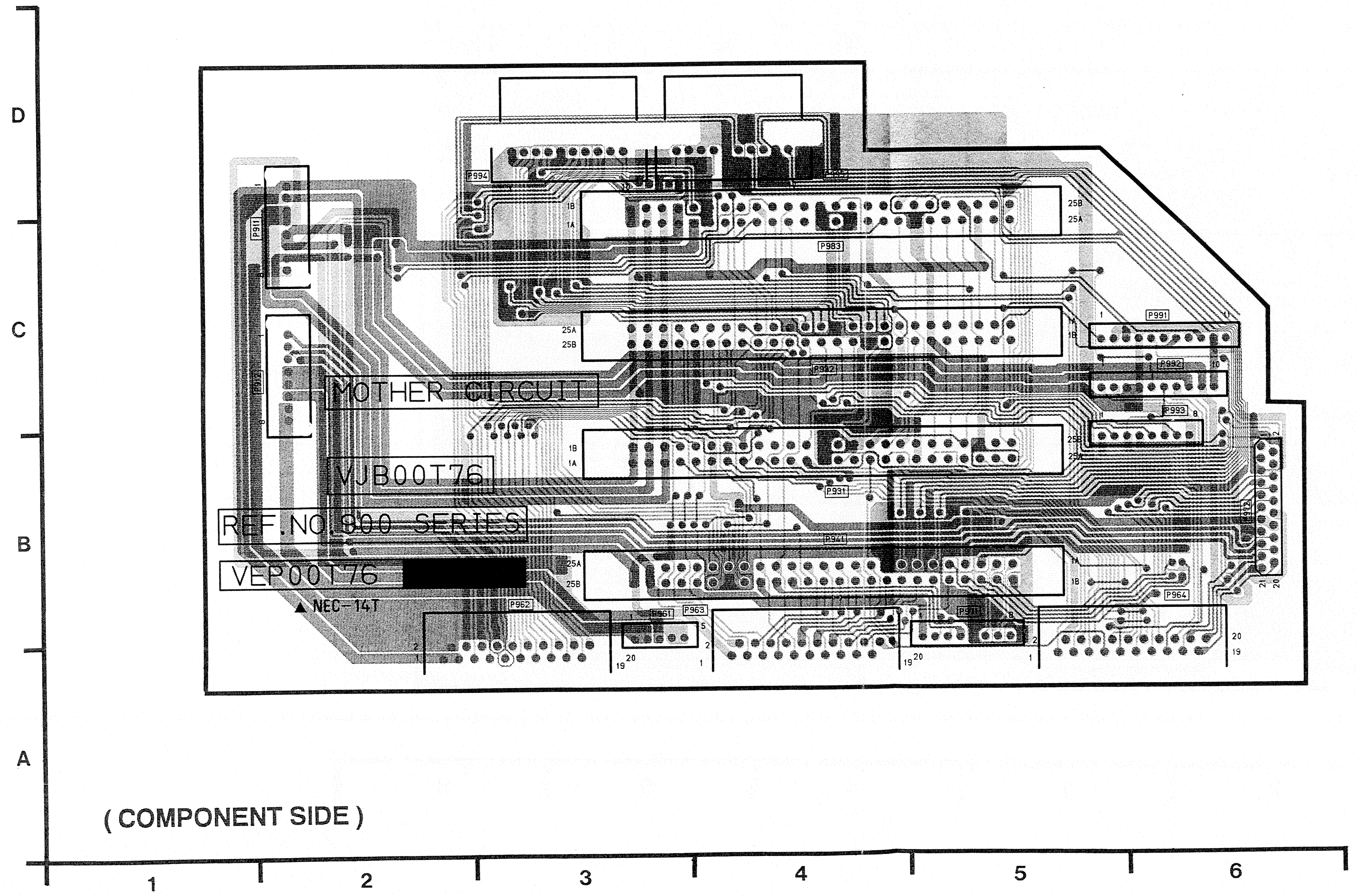
(COMPONENT SIDE)

2 3 4 5

HEAD AMP C.B.A.	
Transistor	
Q5001	A-1 Ⓕ
Q5002	A-1 Ⓕ
Q5003	A-3 Ⓕ
Q5004	A-5 Ⓒ
Q5005	A-2 Ⓕ
Transistor & Resistor	
QR5001	B-1 Ⓕ
Integrated Circuit	
IC5001	A-1 Ⓕ
IC5001	A-4 Ⓒ
IC5002	B-4 Ⓒ
IC5003	A-3 Ⓕ
IC5003	A-4 Ⓒ
Adjustment	
VR5001	B-2 Ⓕ
VR5001	B-4 Ⓒ
VR5002	B-2 Ⓕ
VR5002	B-4 Ⓒ
Test Point	
TP5001	B-2 Ⓕ
TP5001	B-4 Ⓒ
TP5002	B-2 Ⓕ
TP5002	B-4 Ⓒ
TP5003	B-2 Ⓕ
TP5003	B-4 Ⓒ
Connector	
P5001	A-1 Ⓕ
P5001	A-5 Ⓒ
P5002	A-2 Ⓕ
P5002	A-5 Ⓒ
P5003	A-3 Ⓕ
P5003	A-3 Ⓒ

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

MOTHER C.B.A. (VEP00T76A)


D
C
B
A
1
2
3
4
5
6
MOTHER CIRCUIT
VJB00T76
REF.NO.800 SERIES
VEP00T76 [redacted]
▲ NEC-14T
P911
P912
P931
P932
P941
P961
P962
P963
P964
P971
P972
P983
P991
P992
P993
P994
P995

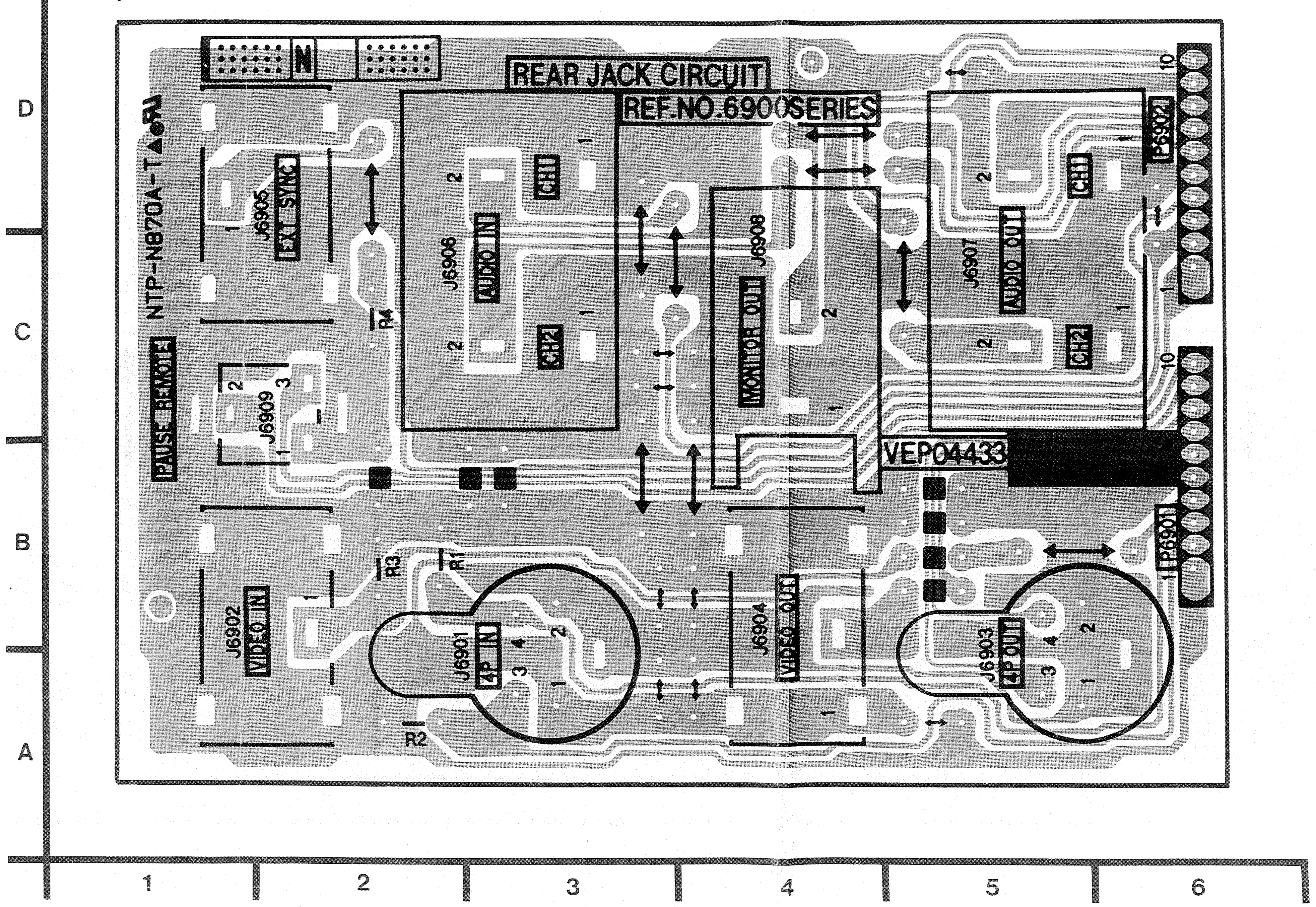
(COMPONENT SIDE)

MOTHER	
Connector	
P911	C-2
P912	C-2
P931	B-4
P932	C-4
P941	B-4
P961	B-3
P962	B-3
P963	B-4
P964	B-6
P971	B-5
P972	B-6
P983	C-4
P991	C-6
P992	C-6
P993	C-6
P994	D-3
P995	D-4

ADDRESS INFORMATION

REAR JACK C.B.A. (VEP04433A)

(COMPONENT SIDE)


REAR JACK CIRCUIT
REF.NO.6900SERIES
NTP-N870A-T
PAUSE REMOTE
J6905
EXT SYNC
J6906
AUDIO IN
CH1
CH2
J6908
MONITOR OUT
J6907
AUDIO OUT
P6902
VEP04433
P6901
J6909
J6902
VIDEO IN
J6901
4P IN
J6904
VIDEO OUT
J6903
4P OUT
R1
R2
R3
R4
1
2
3
4
10
D
C
B
A
1
2
3
4
5
6

SECTION 8

EXPLODED VIEWS & REPLACEMENT PARTS LISTS

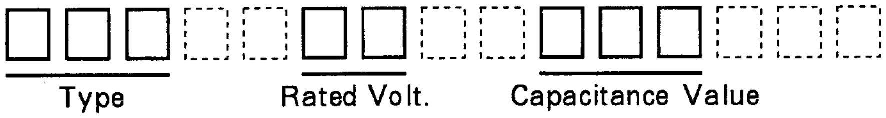
CONTENTS

SERVICING FIXTURES & TOOLS LIST PRT-3
CHASSIS PARTS SECTION PRT-4
MOVING PARTS SECTION PRT-6
CASSETTE COMPARTMENT SECTION PRT-7
CHASSIS & FRAME SECTION PRT-9
PACKING PARTS SECTION PRT-10
ELECTRICAL REPLACEMENT PARTS LIST PRT-12

NOTES

1 . ● Be sure to make your orders of replacement parts according to this list.
   ● "<R>" in Remark column indicates recommended parts.
   ● "<M>" in Remark column indicates needed in the periodical maintenance.
2 . IMPORTANT SAFETY NOTICE
   Components indentified by "<!>" have special characteristics important for safety. When replacing any of these components, use only the original ones. Meaning of symbol "<!>" on this parts list is exactly the same as synbol ⚠ on Schematic and Circuit Board Diagrams.
3 . ITEM NUMBERS WITH CAPITAL LETER E
   Item numbers woth capital leter E (Example: E1, E2, ...) in Ref. no. column mean that the parts are listed with the E item numbers in the exploded views.
4 . When ordering parts, use parts No. only form Part No. column.
5 . Printed circuit board assembly with mark (RTL) is no longer available after discontinuation of the product.
6 . Explanation of part number

《CAPACITOR》



Type

Type	Delectric
ECA ECE ECS ECO	ELECTROLYTIC CAPACITOR
ECC ECF ECK ECU	CERAMIC CAPACITOR
ECH ECQ ECW	PLASTIC FILM CAPACITOR

Rated Volt

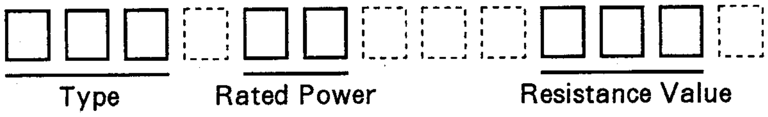
Code	0G	0J	1A	1C	1D	1E	1V	1H	1J	1K
W.V. (V)	4	6.3	10	16	20	25	35	50	63	80

Code	2A	2C	2P	2D	2E	2F	2V	2G	2W	2H
W.V. (V)	100	160	180	200	250	315	350	400	450	500

The 1-st 2 figures are actual values and the 3-rd denotes the number of zero.
"R" denotes the decimal point and all figures are the actual number with "R".

＊Unit ;	Electrolytic Capacitor	μF
	Ceramic Capacitor	pF
	Plastic Film Capacitor	pF

《RESISTOR》



Type

	Delectric
ERD	CARBON RESISTOR
ERF FRW	WIRE WOUND RESISTOR
ERQ ERU	FISE RESISTOR
ERC	SOLID RESISTOR
ERX ERG ERO ERN	METAL RESISTOR
ERJ	CHIP RESISTOR
ERS	THERMAL SENSTIVE RESISTOR

Rated Power

Code	1	2	3	3G	6	8	10	12	14	25
R.Power	1	2	3	1/16	1/10	1/8	1/8	1/2	1/4	1/4

Code	S1	S2								
R.Power	1/2	1/4								

Resistance Value

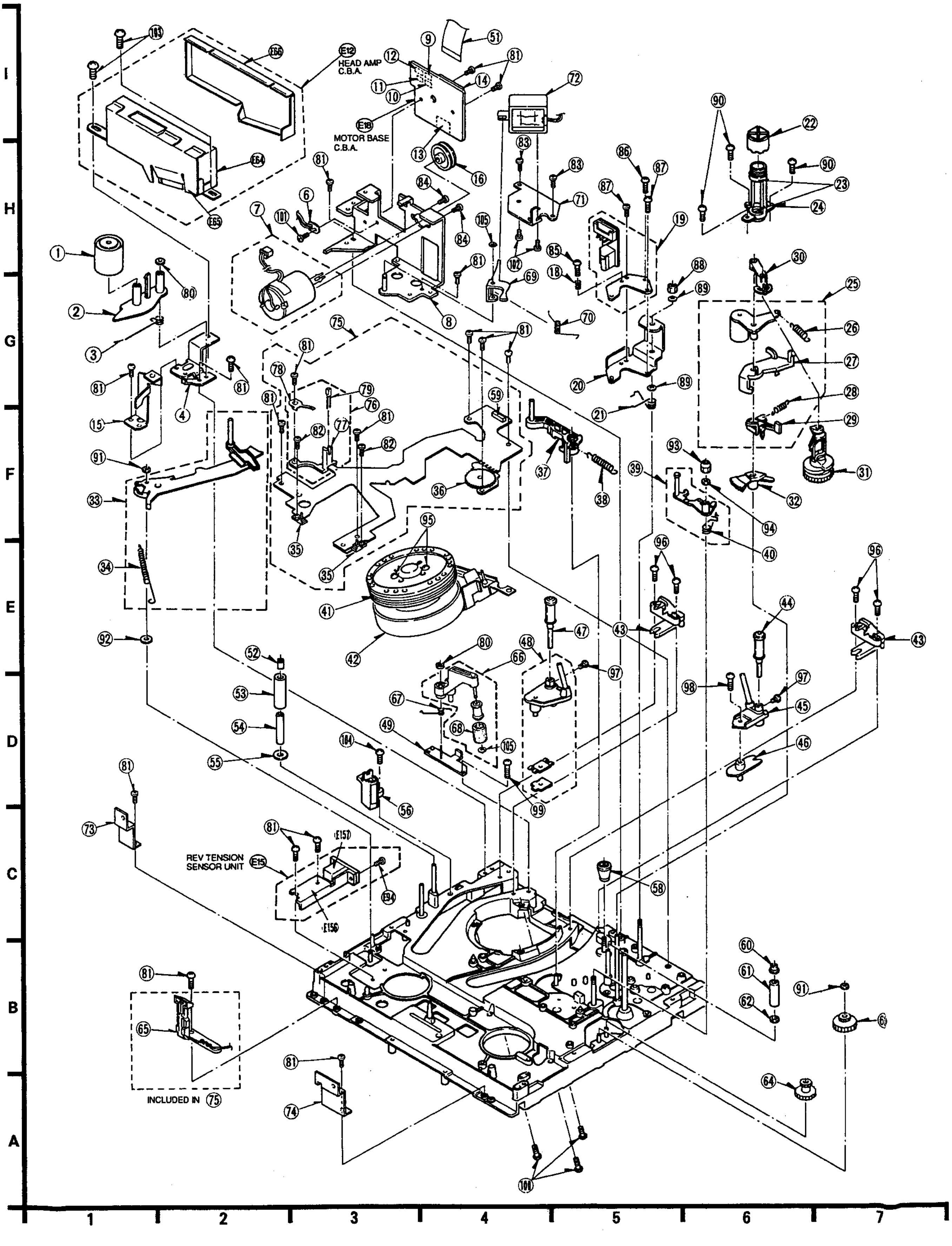
The 1-st 2 figures are actual values and the 3-rd denotes the number of zero.
"R" denotes the decimal point and all figures are the actual number with "R".

Example ; ERDS2TJ471 → CARBON RESISTOR
1/4 470Ω

SERVICING FIXTURES & TOOLS LIST

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VFM8080HQFP	VHS ALIGNMENT TAPE	1	
		VFK0329	POST ADJ. SCREWDRIVER	1	
		VFK0132	BACK TENSION METER	1	(T2-H7-UM)
			(TENTELOMETER, MADE IN		
			U.S.A.)		
		VFK0191	POST ADJ. PLATE	1	
		VFK0133	DIAL TORQUEN GAUGE	1	
		VFK0180	PLASTIC CLAMPER ONLY	1	
		VFK0134	ADAPTOR FOR VFK0133	1	
		VFK0190	REEL TABLE HEIGHT GAUGE	1	
		VFK0236	TENSION POST ADJ. FIXTURE	1	
		VFK0806	TENSION SENSOR ADJ. FIXTURE	1	
		VFK0328	H-POSITION ADJ. SCREWDRIVER	1	
		VFK0330	FINE ADJ. SCREWDRIVER	1	
			(3mm PHI)		
		VFK0335	RETAINING RING REMOVER	1	
			(3mm/4mm)		
		VFK0326	HEX. WRENCH SET	1	
		VFK0948	CHECK LIGHT	1	
		MOR265	MOLYTONE GREASE	1	
		VFK0680	S.C.R. GREASE	1	
		VFK27	HEAD CLEANING STICK	1	
		VFK0344	POST HEIGHT ADJ. FIXTURE	1	
		VFK0269	L TYPE SCREWDRIVER	1	
		VFK66	FAN TYPE TENSION GAUGE	1	
		VFK0945	EXTENDER BOARD 50P	1	
		VFK0828	EXTENDER CODE 8P		
		VFK0131	HIGH QUALITY OIL	1	

EXPLODED VIEWS ① Chassis Parts Section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E12 HEAD AMP C.B.A.
E18 MOTOR BASE C.B.A.
E64
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E66
REV TENSION SENSOR UNIT E15
E156
E157
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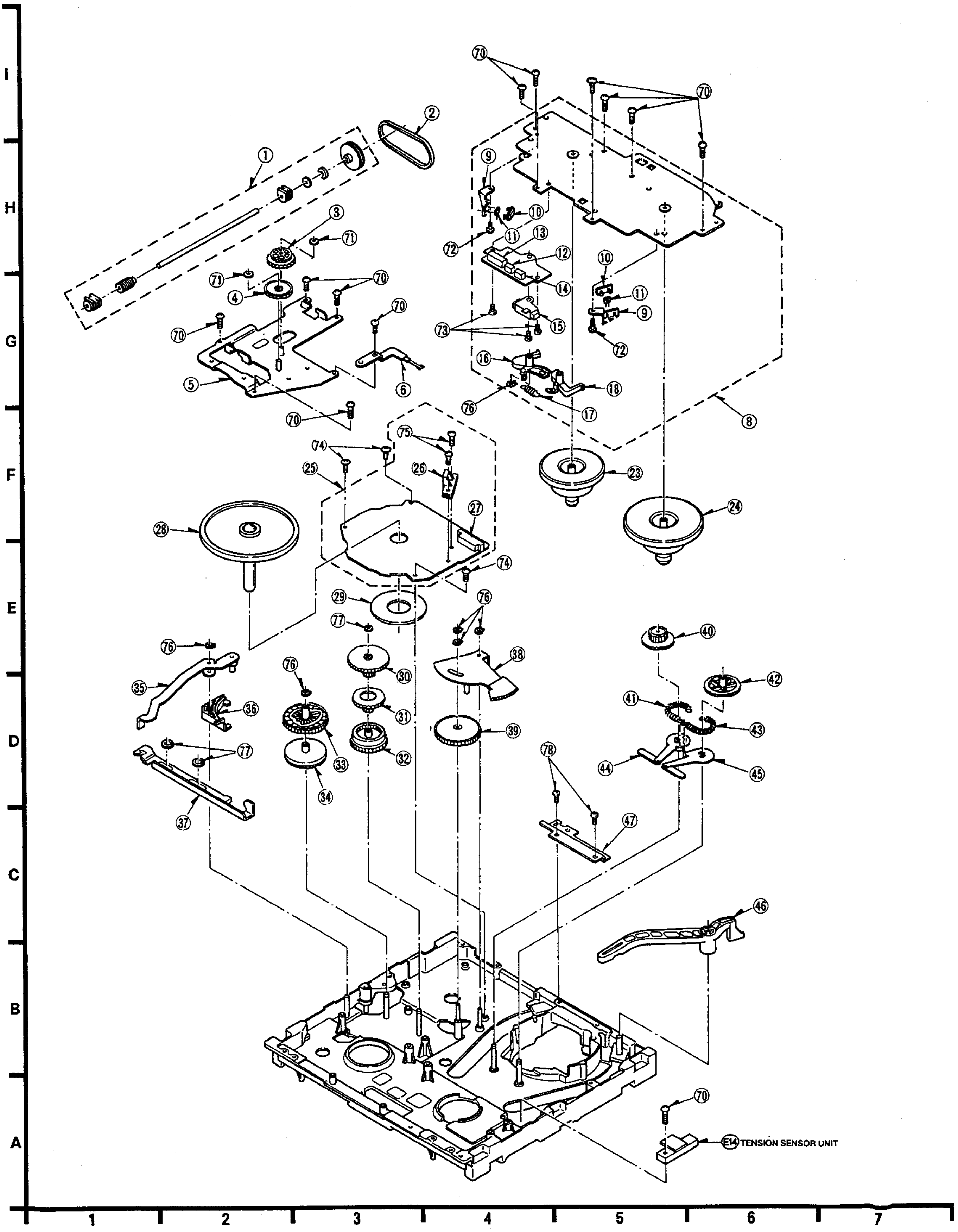
EXPLODED VIEWS AND REPLACEMENT PARTS LISTS

MECHANICAL REPLACEMENT PARTS LIST 1. Chassis Parts Section

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1-1	VXP1075	IMPEDANCE ROLLER UNIT	1	
1-2	VML2293	IMPEDANCE ROLLER ARM	1	
1-3	VMB1976	IMPEDANCE SPRING	1	
1-4	VMA7982	HEAD AMP ANGLE (L)	1	
1-6	VEK3185	HUMIDITY RESISTOR UNIT	1	<R>
1-7	VEM0360	LOADING MOTOR UNIT	1	<M><R><!>
1-8	VXA5151	MOTOR BASE (1) UNIT	1	
1-9	VJP1229G	CONNECTOR (2P)	1	
1-10	VJP1229T	CONNECTOR (2P)	1	
1-11	VJP1229R	CONNECTOR (2P)	1	
1-12	VJP1230R	CONNECTOR (3P)	1	
1-13	VJP3106B013	CONNECTOR (13P)	1	
1-14	VJS1493	CONNECTOR (15P)	1	
1-15	VMA8130	IMPEDANCE ORLLER SUPPORT ANGLE	1	
1-16	VDP1319	MOTOR PULLEY	1	
1-18	VMB1251	ADJUST SPRING	1	
1-19	VED0104	A/C HEAD (1) UNIT	1	<M><R>
1-20	VXA3649	A/C HEAD BASE UNIT	1	
1-21	VMB1567	A/C HEIGHT SPRING	1	
1-22	VXQ0006	THRUST SCREW UNIT	1	
1-23	VMX1033	OIL SEAL	2	
1-24	VXD0101	HOUSING UNIT	1	
1-25	VXL2367	PRESSURE ROLLER UNIT	1	<M><R>
1-26	VMB1977	PINCH PRESSURE SPRING	1	
1-27	VXL2368	PINCH PRESSURE ARM	1	
1-28	VMB1569	PINCH ARM SPRING	1	
1-29	VML1874	PINCH LIFT ARM	1	
1-30	VMX1353	PINCH CAM ARM	1	
1-31	VDG0577	PINCH CAM	1	
1-32	VDG0651	PINCH SECTOR GEAR	1	
1-33	VXL2089	TENSION ARM UNIT	1	
1-34	VMB1975	TENSION SPRING	1	
1-35	VSP0293	CASSETTE DETECT SW	2	
1-36	VSS0257	MODE SWITCH	1	<M><R>
1-37	VXL1857	SUB LOADING ARM (1) UNIT	1	
1-38	VMB1566	SUB POST SPRING	1	
1-39	VXL2074	P5 ARM UNIT	1	
1-40	VMB1554	P5 SPRING	1	
1-41	VEH0461	UPPER CYLINDER UNIT	1	<M><R>
1-42	VEG0909	LOWER CYLINDER UNIT	1	<M><R>
1-43	VMD0910	POST STOPPER	2	
1-44	VXP1094	ROLLER POST (T) UNIT	1	
1-45	VXA3713	INCLINED BASE (T)(1) UNIT	1	
1-46	VXA2687	INCLINED ADJUSTMENT PLATE U	1	
1-47	VXP1093	ROLLER POST (S) UNIT	1	
1-48	VXA3249KIT	INCLINED BASE (S)	1	
1-49	VXA3980	HEAD CLEANING PLATE	1	
1-51	VEE8714	FLEXIBLE CABLE	1	
1-52	VMX1088	SUPPLY UPPER LIMITER	1	
1-53	VDP1304	SUPPLY ROLLER	1	
1-54	VMX1581	P1 COLLAR	1	
1-55	VMX1533	SUPPLY LOWER LIMITER	1	
1-56	VBS0038	FE HEAD	1	
1-58	VHN0110	ADJUST NUT	1	
1-59	VJS2964A013	CONNECTOR (15P)	1	
1-60	VMX1544	P4 UPPER LIMITER	1	
1-61	VMX1568	P4 SLEEVE	1	
1-62	VMX1534	P4 LOWER LIMITER	1	
1-63	VDG0664	CONNECTION GEAR	1	
1-64	VDG0483	PINCH SPEED DOWN GEAR	1	
1-65	VES0489	SAFETY SWITCH	1	
1-66	VXL2263	HEAD CLEANING UNIT	1	<M><R>
1-67	VMB2532	CLEANING SPRING	1	
1-68	VMT0321	HEAD CLEANING PAD	1	
1-69	VML2845	CAM LEVER	1	
1-70	VMB2672	CAM LEVER SPRING	1	
1-71	VMA8977	SOLENOID BASE	1	
1-72	VSJ0111	PINCH SOLENOID	1	
1-73	VMA6895	MOUNT PLATE (L)	1	
1-74	VMA6896	MOUNT PLATE (R)	1	
1-75	VXA5166	BIND FLEXIBLE UNIT	1	
1-76	VXA3520	LED UNIT	1	
1-77	VMD0911	LED HOLDER	1	
1-78	VMB2020	EARTH SPRING	1	
1-79	GL450	LED	1	
1-80	VMX1079	CUT WASHER	2	
1-81	XTV26+6F	SCREW	14	
1-82	XTV2+4F	SCREW	2	
1-83	XYN26+K5	SCREW	2	
1-84	XSN3+3.5	SCREW	2	
1-85	VHD0322	SCREW	1	
1-86	VHD0089B	SCREW	1	
1-87	XSN3D6FZ	SCREW	2	
1-88	VHN0063	M4 NYLON NUT	1	
1-89	XWE4	M4 NYLON WASHER	2	
1-90	VHD0374	SCREW	3	
1-91	VMX0653	CUT WASHER	2	
1-92	XWGV3D6G	POLLY SLIDER WASHER	1	
1-93	VHD0045	M3 NYLON NUT	1	
1-94	XWE3VW	M3 WASHER	1	
1-95	VHD0425	SCREW	2	
1-96	XTV26+10F	SCREW	4	
1-97	VHD0133	SCREW	2	
1-98	XYN26+F6FZ	SCREW	1	
1-99	XTN3+6F	SCREW	1	
1-100	VHD0342	SCREW	3	
1-101	XTV2+6J	SCREW	1	
1-102	XYN26+C4	SCREW	2	
1-103	XTW3+8TR	SCREW	2	
1-104	XTV26+8E	SCREW	1	
1-105	VMX0653	CUT WASHER	11	

② Moving Mechanism Section



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E14 TENSION SENSOR UNIT

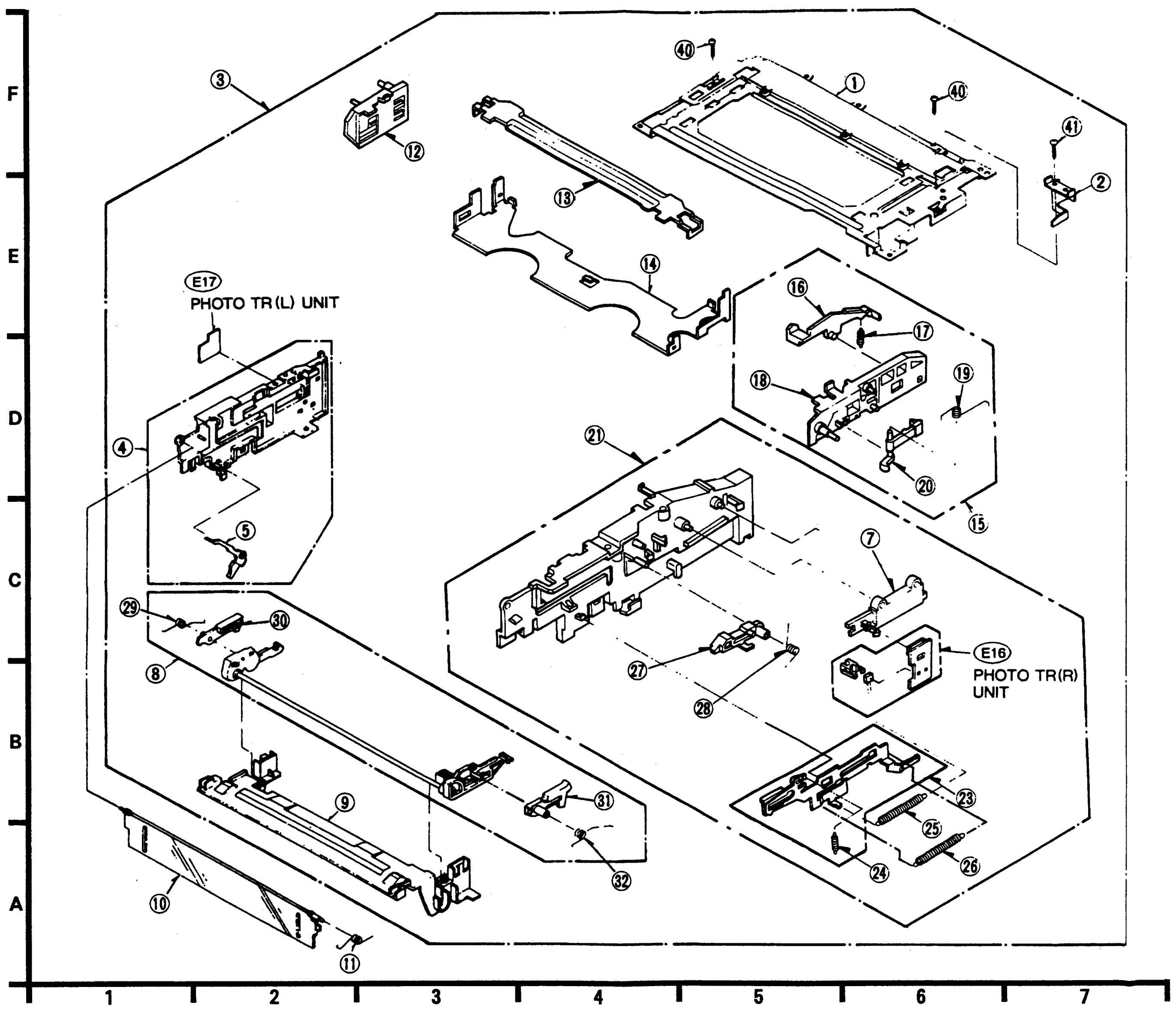
2. Moving Mechanism Section

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
2-1	VXP1082	WORM SHAFT UNIT	1	
2-2	VDV0228	LOADING BELT	1	<M><R>
2-3	VDG0581	WORM WHEEL	1	
2-4	VDG0582	INTERMEDIATE GEAR	1	
2-5	VXA3646	GEAR BASE (1) UNIT	1	
2-6	VXS0098	EARTH SPRING UNIT	1	
2-8	VXA4839	STATOR BASE UNIT	1	
2-9	VMD0611	FG SUPPORT (1)	2	
2-10	VMD0621	FG SUPPORT (2)	2	
2-11	HW-300B	HOLE IC	2	<R>
2-12	VJP1230R	CONNECTOR (3P)	1	
2-13	VJP3202A008Z	CONNECTOR (8P)	1	
2-14	VJP1230T	CONNECTOR (3P)	1	
2-15	VSJ0066	SOLENOID	1	<I>
2-16	VXZ0270	MAIN BRAKE (S) UNIT	1	<R>
2-17	VMB1978	BRAKE SPRING	1	
2-18	VXZ0314	MAIN BLAKE (T) UNIT	1	<R>
2-23	VXR0187	TAKEUP REEL TABLE UNIT	1	<R>
2-24	VXR0225	SUPPLY REEL TABLE UNIT	1	<R>
2-25	VEK4097	STATOR UNIT	1	
2-26	VBK0063	MR HEAD	1	<R>
2-27	VJP1902	CONNECTOR	1	
2-28	VXP1328	ROTOR UNIT	1	
2-29	VMA6847	SUB PLATE	1	
2-30	VDG0580	CENTER GEAR	1	
2-31	VXP0878	RETANER GEAR UNIT	1	
2-32	VDG0342	RING GEAR	1	
2-33	VDG0578	MAIN CAM GEAR	1	
2-34	VDG0343	SUB CAM GEAR	1	
2-35	VXL1895	CAM FOLLOWER ARM UNIT	1	
2-36	VML1861	DETENT ARM	1	
2-37	VMM0218	MAIN ROD	1	
2-38	VXA3144	SECTOR GEAR UNIT	1	
2-39	VDG0579	LOADING CAM GEAR	1	
2-40	VDG0420	LOADING GEAR (T)	1	
2-41	VMB1555	LOADING SPRING (T)	1	
2-42	VDG0593	LOADING GEAR (S)	1	
2-43	VMB1746	LOADING SPRING (S)	1	
2-44	VXL1489	LOADING ARM (T)(1) UNIT	1	
2-45	VXL1487	LOADING ARM (S)(1) UNIT	1	
2-46	VML2304	CLEANING ROD	1	
2-47	VMA8003	MOUNT PLATE (B)	1	
2-70	XTV26+6F	SCREW	12	
2-71	VMX0653	CUT WASHER	2	
2-72	XYN2+F5	SCREW	2	
2-73	XSN26+4	SCREW	3	
2-74	XYEV0004	SCREW	3	
2-75	XYNV0015	SCREW	2	
2-76	XUEV3VW	WASHER	6	
2-77	XUEV3VW	CUT WASHER	3	
2-78	XTV3+8E	SCREW	2	

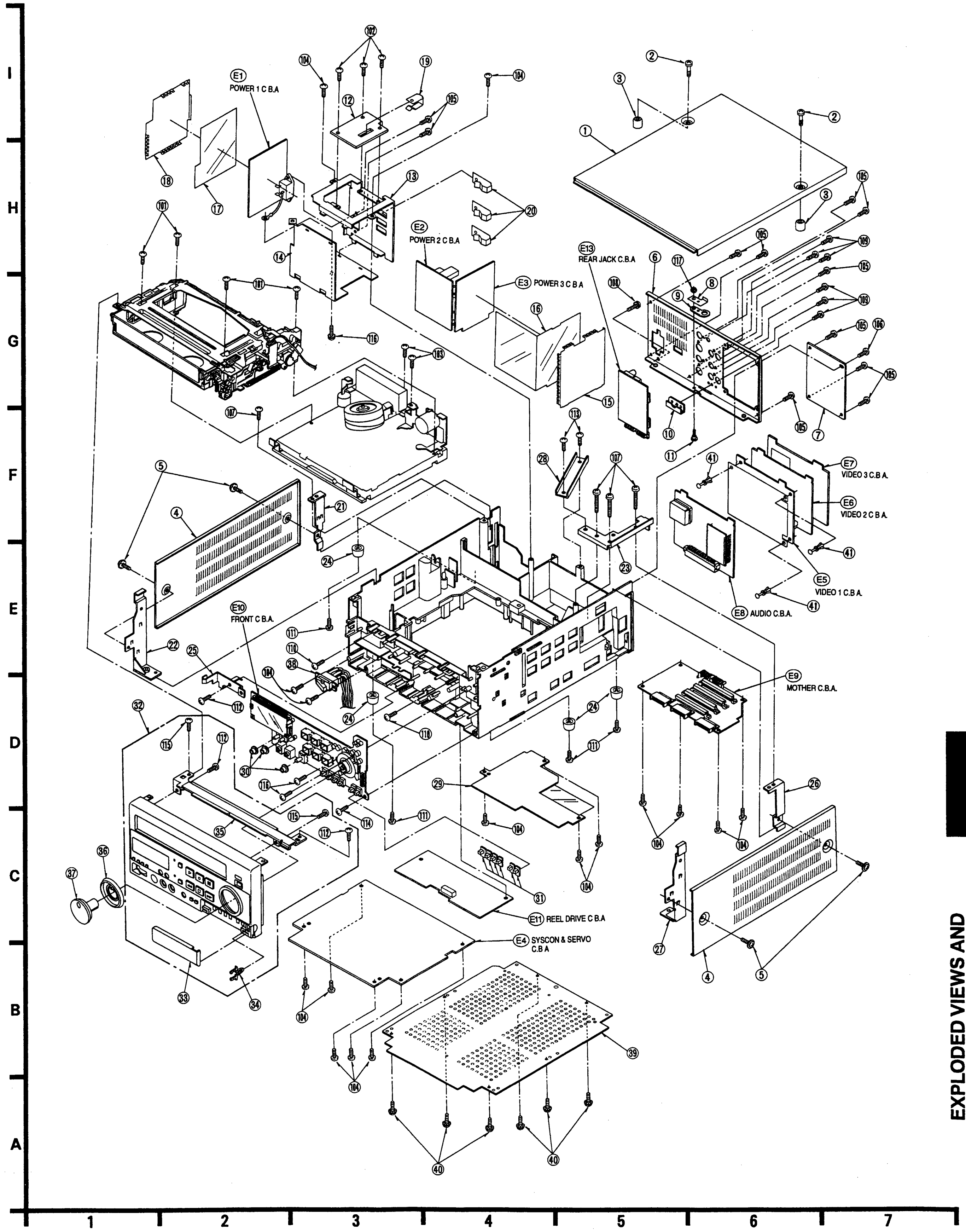
3. Cassette Compartment Section

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
3-1	VMA7223	TOP PLATE	1	
3-2	VMA7224	CASSETTE HOLDER ANGLE	1	
3-3	VXA4535	CASSETTE COMPERTMENT UNIT	1	
3-4	VXA4467	SIDE PLATE (L)(1) UNIT	1	
3-5	VML1880	OPENER LEVER	1	
3-7	VSS0258	SLIDE SWITCH	1	
3-8	VXP0987	MAIN SHAFT UNIT	1	
3-9	VMA6900	CASSETTE GUIDE UNIT	1	
3-10	VKF1487	BLINDER PANEL	1	
3-11	VMB1258	BLINDER SPRING	1	
3-12	VMD1387	HOLDER GUIDE	1	
3-13	VXA3831	HOLDER ANGLE UNIT	1	
3-14	VMA8406	CASSETTE HOLDER	1	
3-15	VXA3780	HOLDER GUIDE (R) UNIT	1	
3-16	VML1882	DOOR OPEN LEVER	1	
3-17	VMB1584	DOOR OPEN LEVER SPRING	1	
3-18	VMD1352	HOLDER GUIDE (R)	1	
3-19	VMB2013	RELEASE SPRING	1	
3-20	VML2306	RELEASE LEVER	1	
3-21	VXA4076	SIDE PLATE (R)(1) UNIT	1	
3-22	VSS0258	SLIDE SWITCH	1	
3-23	VXA3497	SUB RACK UNIT	1	
3-24	VMB1962	RACK C SPRING	1	
3-25	VMB1943	CLUTCH SPRING (A)	1	
3-26	VMB1942	CLUTCH SPRING (B)	1	
3-27	VML2427	DOWN SUPPORT LEVER	1	
3-28	VMB1961	DOWN SUPPORT SPRING	1	
3-29	VMB1836	SUB WIPER SPRING (L)	1	
3-30	VML1876	SUB WIPER ARM (L)	1	
3-31	VML1877	SUB WIPER ARM (R)	1	
3-32	VMB1837	SUB WIPER SPRING (R)	1	
3-40	XTB26+8G	SCREW	2	
3-41	XTV26+6F	SCREW	1	
3-42	XTV26+8FR	SCREW	4	

③ Cassette Compartment Section



④ Chassis Frame Section



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EXPLODED VIEWS AND REPLACEMENT PARTS LISTS

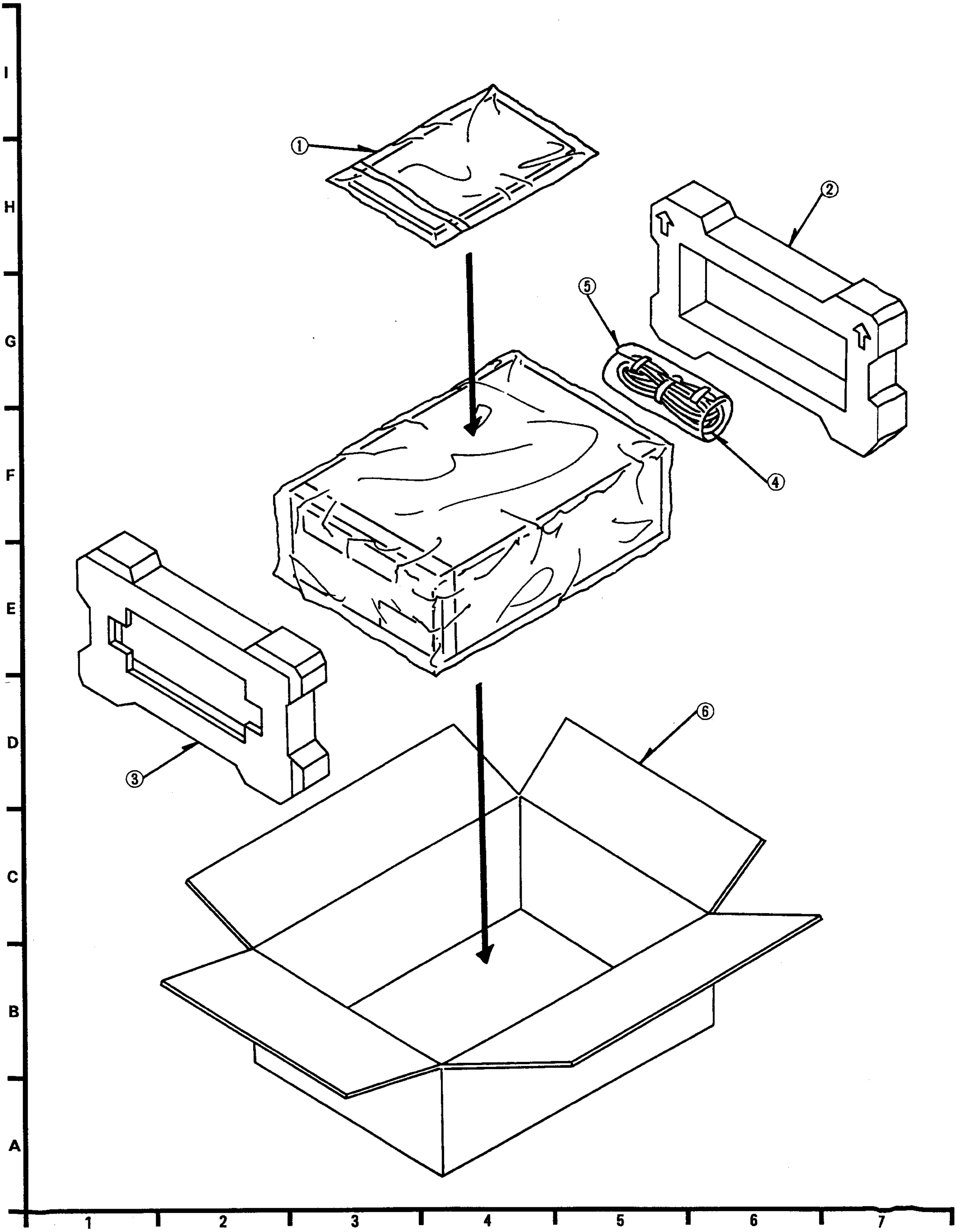
4. Chassis Frame Section

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
4-1		VGM1054	TOP PLATE	1	
4-2		VHD0222	SCREW	2	
4-3		VMX2248	TOP PANEL SPACER	2	
4-4		VGM1055	SIDE PLATE	2	
4-5		VHD0305	SCREW	4	
4-6		VXA5159	JACK PANEL	1	
4-7		VMP2376	RS-232C COVER	1	
4-8		VMC0993	HOOK SPRING	1	
4-9		VGK2091	HOOK	1	
4-10		VMP4250	SUPPORT ANGLE	1	
4-11		VHD0052	SCREW	1	
4-12		VSC4008	POWER SHIELD COVER (C)	1	
4-13		VSC4009	HEAT SINK (A)	1	
4-14		VSC4005	HEAT SINK (B)	1	
4-15		VSC4006	POWER SHIELD COVER (A)	1	
4-16		VMZ2247	SHIELD SHEET (B)	1	
4-17		VMZ2246	SHIELD SHEET (A)	1	
4-18		VSC4007	POWER SHIELD COVER (B)	1	
4-19		VMC0981	TR. SUPPORT SPRING (1)	1	
4-20		VMC0357	TR. SUPPORT SPRINT (2)	3	
4-21		VMP4254	SIDE PLATE ANGLE (REAR L)	1	
4-22		VXA5157	SIDE PLATE ANGLE (FRONT L)	1	
4-23		VMP4253	TOP PLATE ANGLE	1	
4-24		VKA0117	FOOT	4	
4-25		VMC1001	EARTH SPRING	1	
4-26		VMP4255	SIDE PLATE ANGLE (REAR R)	1	
4-27		VXA5158	SIDE PLATE ANGLE (FRONT R)	1	
4-28		VXA5160	P.C.B. SUPPORT ANGLE	1	
4-29		VMP3842	SHIELD PLATE	1	
4-30		VGU6509	VOLUME KNOB	3	
4-31		VGU6516	SLIDE KNOB	6	
4-32		VYP5452	FRONT PANEL	1	
4-33		VKW1848	OPERATION DOOR	1	
4-34		VGQ1442	PEACE	1	
4-35		VMP4247	LEINFORCE ANGLE	1	
4-36		VGU6554	SHUTTLE RING	1	
4-37		VXU1139	JOG DIAL	1	
4-38		VES0704	POWER SWITCH	1	
4-39		VKU0394	BOTTOM PLATE	1	
4-40		VHD0059	SCREW	6	
4-41		VHN0030	RIVET	3	
4-101		XTV26+8FR	SCREW	4	
4-102		XTV3+8F	SCREW	3	
4-103		XTW3+8TFR	SCREW	3	
4-104		XTV3+10JFR	SCREW	18	
4-105		XTB3+8FFZ	SCREW	9	
4-106		XTB3+12FFZ	SCREW	1	
4-107		XTV3+10G	SCREW	4	
4-108		XTB4+10JFN	SCREW	1	
4-109		XTV3+8GFZ	SCREW	5	
4-110		XTV4+8F	SCREW	2	
4-111		XTV3+16G	SCREW	4	
4-112		XTV3+8G	SCREW	3	
4-113		XTV3+8FFR	SCREW	2	
4-114		XTV4+10JFR	SCREW	1	
4-115		XTW3+10LR	SCREW	2	
4-116		XYE4+EF6	SCREW	1	
4-117		XNG3B	NUT	1	

5. Packing Parts Section

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
5-1		VQT5616	OPERATING INSTRUCTIONS	1	
5-2		VPN3813	CUSHION (REAR)	1	
5-3		VPN3814	CUSHION (FRONT)	1	
5-4		VJA0796	POWER CORD	1	
5-5		VPF0136	POWER CORD SHEET	1	
5-6		VPG7275	PACKING CASE	1	

⑤ Packing Parts Section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ELECTRICAL REPLACEMENT PARTS LIST

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
E1		VEP01571A	P.C.BOARD W/COMPONENT POWER (1)	1	(RTL)<R>
E2		VEP01572A	P.C.BOARD W/COMPONENT POWER (2)	1	(RTL)<R>
E3		VEP01573A	P.C.BOARD W/COMPONENT POWER (3)	1	(RTL)<R>
E4		VEP06920A	P.C.BOARD W/COMPONENT SYSCON & SERVO	1	(RTL)<R>
E5		VEP03A79A	P.C.BOARD W/COMPONENT VIDEO (1)	1	(RTL)<R>
E6		VEP03A80A	P.C.BOARD W/COMPONENT VIDEO (2)	1	(RTL)<R>
E7		VEP08164A	P.C.BOARD W/COMPONENT VIDEO (3)	1	(RTL)<R>
E8		VEP04432A	P.C.BOARD W/COMPONENT AUDIO	1	(RTL)<R>
E8-1		VEP04353B	P.C.BOARD W/COMPONENT FM AUDIO	1	(RTL)<R> FOR VEP04432A
E9		VEP00T76A	P.C.BOARD W/COMPONENT MOTHER	1	(RTL)<R>
E10		VEP06921A	P.C.BOARD W/COMPONENT FRONT	1	(RTL)<R>
E11		VEP02399A	P.C.BOARD W/COMPONENT REEL DRIVE	1	(RTL)<R>
E12		VEP05162I	P.C.BOARD W/COMPONENT HEAD AMP	1	(RTL)<R>
E13		VEP04433A	P.C.BOARD W/COMPONENT REAR JACK	1	(RTL)<R>
E14		VEK2657	P.C.BOARD W/COMPONENT TENSION SENSOR UNIT	1	(RTL)<R>
E15		VEK4265	P.C.BOARD W/COMPONENT REV TENSION SENSOR UNIT	1	(RTL)<R>
E16		VEK4676	P.C.BOARD W/COMPONENT PHOTO TR (R) UNIT	1	(RTL)<R>
E17		VEK3578	P.C.BOARD W/COMPONENT PHOTO TR (L) UNIT	1	(RTL)<R>
E18		VEK6633	P.C.BOARD W/COMPONENT MOTOR BASE	1	(RTL)<R>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP01571A	P.C.BOARD W/COMPONENT	1	
		POWER (1)		
	VJF0318	FUSE HOLDER	4	<!>
	VMZ0429	FUSE COVER	2	<!>
	VMZ1305	CAPACITOR COVER	2	<!>
	VEP01572A	P.C.BOARD W/COMPONENT	1	
		POWER (2)		
	VMZ0954	CAPACITOR COVER	4	<!>
	VMZ1305	CAPACITOR COVER	1	<!>
	VEP06920A	P.C.BOARD W/COMPONENT	1	
		SYSCON & SERVO		
	VJF0304	CLAMPER	2	
	VMC0075	INSULATOR SUPPORT SPRING	1	
	VMC0493	INSULATOR SUPPORT SPRING	1	
	VSC1215	IC INSULATOR	1	
	VSC3405	INSULATOR	1	
	VWJ04CN280CC	FLEXBLE WIRE	2	
	VWJ0753	FLEXBLE WIRE	1	
	VMX0985	SPACER	2	
	VEP03A79A	P.C.BOARD W/COMPONENT	1	
		VIDEO (1)		
	VMZ2245	INSULATION SHEET	1	
	VEP08164A	P.C.BOARD W/COMPONENT	1	
		VIDEO (3)		
	VSC4010	SHIELD CASE (UPPER)	1	
	VSC4011	SHIELD CASE (MIDDLE)	1	
	VSC4012	SHIELD CASE (LOWER)	1	
	VEP04432A	P.C.BOARD W/COMPONENT	1	
		AUDIO		
	VSC4001	SHIELD CASE (UPPER)	1	
	VSC4002	SHIELD CASE (MIDDLE)	1	
	VSC4003	SHIELD CASE (LOWER)	1	
	VEP00T76A	P.C.BOARD W/COMPONENT	1	
		MOTHER		
	XNG26BFZ	NUT	1	
	XYN26+C8FZ	SCREW	1	
	VEP06921A	P.C.BOARD W/COMPONENT	1	
		FRONT		
	VSQ0651	DIAL ENCORDER	1	
	VGU6510	LED HOLDER	2	
	VJF1088	LCD HOLDER	1	
	VMP4258	FRONT ANGLE	2	
	VMX1658	SPACER	4	
	XYE3+EF6	SCREW	1	
	XTV3+6F	SCREW	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP02399A	P.C.BOARD W/COMPONENT	1	
		REEL DRIVE		
	VMX2183	P.C.B. SPACER	1	
	VEP05162I	P.C.BOARD W/COMPONENT	1	
		HEAD AMP		
	VSC3119	SHIELD CASE (MIDDLE)	1	
	VSC3039	SHIELD CASE (UPPER)	1	
	VSC3040	SHIELD CASE (LOWER)	1	
	VEP04433A	P.C.BOARD W/COMPONENT	1	
		REAR JACK		
	VMP4259	REAR ANGLE	1	
	VEK4265	P.C.BOARD W/COMPONENT	1	
		REV TENSION SENSOR UNIT		
	VMA7987	REV PHOTO HOLDER	1	
	ON1108	PHOTO INTERRRUPTER	1	
	XTV26+4F	SCREW	1	
	VEK4676	P.C.BOARD W/COMPONENT	1	
		PHOTO TR (R) UNIT		
	VMD0645	PHOTO TR HOLDER	1	
	VEK3578	P.C.BOARD W/COMPONENT	1	
		PHOTO TR (L) UNIT		
	VMD0645	PHOTO TR HOLDER	1	

Ref.No.	Part No.	Pcs	
=========	[VEP01571A]		
	POWER (1)		
C1101,02	ECQU2A224MN	2	!
F1101,02	XBA1C20NB5	2	!
L1101	ELF18D602	1	!
P1101	VJS2985	1	
P1102	VJP2639	1	
R1101	ERC12GM334	1	!
=========	[VEP01572A]		
	POWER (2)		
C1001	ECQU2A224MN	1	!
C1002-05	VCK0041	4	!
C1012	ECEC2GC221DB	1	
C1013	ECQE6473KF	1	
C1014	ECKD3D151KB	1	
C1015	ECA1VXLV470	1	
C1017	ECKF1H102KB	1	
C1018	ECA0GXLV331	1	
C1038	ECKF1H271KB	1	
D1001	D3SBA60	1	!
D1005	MA723	1	
D1014	AP01C	1	
D1015	VSD0001	1	
D1016	MA4240-H	1	
IC1001	STRM6545LF	1	!
L1001	ELF18D602	1	!
L1003	VLP0074	1	
L1009	EXCELSA35	1	
P1001	VJP2639	1	
R1001	ERU5TEK1R5	1	!
R1002-04	ERG1SJ473	3	
R1005	ERG3SJ393	1	
R1006	ERDS2FJ221	1	
R1007	ERDS2FJ271	1	
R1008	ERDS2FJ471	1	
R1009	ERW1PKR56T	1	
R1010	ERDS2FJ152	1	
R1011	ERDS2FJ101	1	
R1012	ERDS2FJ103	1	
R1019	ERDS2FJ224	1	
R1020	ERDS1TJ395	1	
R1021	ERDS1TJ475	1	
=========	[VEP01573A]		
	POWER (3)		
C1019	ECA1AFZ331	1	
C1020	ECEA1AGE471	1	
C1021	ECQV1H104JZ	1	
C1022-25	ECKF1H103ZF	4	
C1026	ECEA1HFS101	1	
C1027	ECA1VFQ681	1	
C1028	ECEA1VGE471	1	

Ref.No.	Part No.	Pcs	
C1029	ECEA1CGE221	1	
C1030	ECKD2H101KB	1	
C1031	ECA1EFZ471	1	
C1032	ECEA1EGE471	1	
C1033	ECKD2H101KB	1	
C1034	ECA1AFZ122	1	
C1035	ECKF1H103ZF	1	
C1036	ECEA1AGE221	1	
C1037	ECKD2H221KB	1	
D1006	AK04	1	
D1007	VSD0001	1	
D1008	RL4Z	1	
D1010	FMLG12SP	1	
D1011	FMB-G14L	1	
D1012	UPC1093J	1	
D1017	RL4Z	1	
IC1002	SI3120CA	1	
L1004	VLQ0410	1	
L1005,06	VLQ0592	2	
L1007	VLQEL06F101J	1	
L1008	VLP0083	1	
P1002,03	VJP3324	2	
Q1001	PS2561L1	1	!
R1013	ERDS2TJ271	1	
R1014	ERDS2TJ561	1	
R1015	ER0S2CKG1801	1	
R1016	ERDS2TJ102	1	
R1017	ER0S2CKG1301	1	
R1018	ERQ12HJ4R7	1	!
T1001	VLT0731	1	!
=========	[VEP06920A]		
	SYSCON SERVO		
C2001	ECEA0JU102	1	
C2002	ECUM1H103ZFN	1	
C2005	ECUM1H103ZFN	1	
C2006	ECEA1CKA330	1	
C2007	ECUM1H104ZFN	1	
C2008	ECUM1H220JCN	1	
C2009	ECUM1H180JCN	1	
C2013	ECEA1HKN010	1	
C2016	ECEA1CKA220	1	
C2017	ECUM1H103ZFN	1	
C2018	ECEA1CKN100	1	
C2019	ECQB1H472JF	1	
C2021	ECEA1CKA330	1	
C2022	ECEA1CKA220	1	
C2023	ECEA0JKA470	1	
C2024	ECUM1H471JCN	1	
C2025	ECEA0JKA221	1	
C2026	ECEA1CKA100	1	
C2027	ECEA1HKA3R3	1	
C2028	ECEA1CKA220	1	
C2029,30	ECEA1EKN3R3	2	
C2031	ECUM1H223ZFN	1	
C2032	ECUM1H392KBN	1	
C2033	ECUM1H104ZFN	1	
C2034	ECQB1H683JF	1	
C2035	ECUM1H103KBN	1	
C2036	ECUM1H104ZFN	1	
C2037	ECEA1HU4R7	1	
C2038	ECUM1H222KBN	1	
C2039,40	ECUM1H271JCN	2	

Ref.No.	Part No.	Pcs	
C2041	ECEA1CKA220	1	
C2042-56	ECUM1H271JCN	15	
C2065	ECEA0JKA470	1	
C2067	ECUM1H102KBN	1	
C2069	ECUM1H271JCN	1	
C2070	ECUM1H104ZFN	1	
C2071	ECEA1ASS332Z	1	
C2072	ECQB1H332JF	1	
C2075	ECEA1CKA220	1	
C2076	ECEA0JKA470	1	
C2301	ECEA0JKA470	1	
C2303-06	ECQV1H104JZ	4	
C2307	ECQB1H683JF	1	
C2308,09	ECEA1HKN4R7	2	
C2310	ECQB1H473JF	1	
C2311	ECEA0JKA470	1	
C2312	ECQV1H474JZ	1	
C2313	ECEA1EKA470	1	
C2314	ECEA0JKA470	1	
C2315	ECUM1H333KBN	1	
C2316	ECQV1H104JZ	1	
C2318,19	ECEA1HKA2R2	2	
C2320-23	ECUM1H333KBN	4	
C2324	ECUM1H103ZFN	1	
C2325	ECEA1CKA470	1	
C2326,27	ECEA0JKA470	2	
C2328	ECEA1HKA2R2	1	
C2329,30	ECUM1H221JCN	2	
C2333	ECEA1HKN2R2	1	
C2336	ECEA1HKN2R2	1	
C2337,38	ECUM1H102KBN	2	
C2339	ECQV1H104JZ	1	
C2340	ECEA1HKN4R7	1	
C2343,44	ECUM1H680JCN	2	
C2501	ECQB1H473JF	1	
C2502	ECQB1H222JF	1	
C2503	ECQB1H273JF	1	
C2504	ECQB1H222JF	1	
C2510	ECEA1CKA470	1	
C2512-14	ECUM1H103ZFN	3	
C2516-19	ECUM1H103ZFN	4	
C2901	ECEA1CKA101	1	
C2902	ECEA1HKA010	1	
C2903	ECUM1H271JCN	1	
C2904	ECUM1H820JCN	1	
C2905	ECUM1H561JCN	1	
C2906	ECEA1HKA010	1	
C2907	ECUM1H103ZFN	1	
C2908	ECQB1H222JF	1	
C2909	ECEA1EU221	1	
C2910	ECEA1HU4R7	1	
C2911	ECUM1H102KBN	1	
C2912	ECEA1EU221	1	
C2913	ECEA1HU4R7	1	
C2914	ECUM1H102KBN	1	
C2915	ECEA1EU221	1	
C2916,17	ECEA1EU101	2	
C2918	ECEA1CKA101	1	
C2919	ECUM1H103ZFN	1	
C2920	ECQV1H104JZ	1	
C2921	ECEA1HKA2R2	1	
C2922	ECEA1CKA101	1	
C2923	ECUM1H103ZFN	1	
C2925	ECEA1EU101	1	
C2926	ECEA1CKA330	1	
C6001	ECEA1EU4R7	1	
C6002	ECQB1H104JF	1	
C6003,04	ECUM1H101JCN	2	
C6005,06	ECUM1H103ZFN	2	
C6007,08	ECEA1ASS332	2	
C6009	ECUM1E104ZFN	1	
C6010	ECQV1H224JZ	1	
C6011	ECEA1CU222	1	
C6012	ECEA1HKA010	1	
C6013	ECEA0JKA470	1	

Ref.No.	Part No.	Pcs	
C6014	ECEA1CKA470	1	
C6015	ECQB1H103JF	1	
C6016	ECEA1CKA100	1	
C6017	ECQB1H472JF	1	
C6018	ECQB1H333JF	1	
C6019	ECQB1H103JF	1	
C6020	ECEA1CKA470	1	
C6021	ECUM1H103ZFN	1	
C6022	ECEA1CKA470	1	
C6023	ECUM1H103ZFN	1	
C6024-27	ECQB1H102JF	4	
C6028	ECUM1H151JCN	1	
C6029,30	ECEA1CKA100	2	
C6031	ECEA1CKA470	1	
C6032	ECEA1HKN010	1	
C6033,34	ECQB1H104JF	2	
C6035	ECEA1CKA101	1	
C6036	ECEA1CN101	1	
C6037	ECEA0JKA470	1	
C6038,39	ECUM1H330JCN	2	
C6040	ECUM1E104ZFN	1	
C6041	ECEA1CKA220	1	
C6042	ECUM1E104ZFN	1	
C6043,44	ECUM1H221KBN	2	
C6045	ECUM1H271KBN	1	
C6046,47	ECUM1H103ZFN	2	
C6048	ECEA1EU470	1	
C6049	ECQV1H104JZ	1	
C6050	ECEA1EKA470	1	
C6051	ECUM1H103ZFN	1	
C6052	ECUM1E104ZFN	1	
D2001	MA151WK	1	
D2003,04	11EQS04	2	
D2005	MA151WK	1	
D2304,05	MA153	2	
D2306	MA4062M	1	
D2501,02	MA151K	2	
D2901	MA3160-L	1	
D2902	11DQ04	1	
D2903	MA3160-L	1	
D2904	11DQ04	1	
D2905	MA3160-L	1	
D2906	11DQ04	1	
D2907	MA701	1	
D2908	8P2M	1	
D2909	MA3020	1	
D2911	MA151K	1	
D2912	MA4140-M	1	
D2913	MA3140-M	1	
D2914-16	MA3160-H	3	
D2917-19	MA151K	3	
D2920	MA3068M	1	
D2921	MA165	1	
D2922	MA3110-H	1	
D6001	MA4075M	1	
D6002	MA151K	1	
D6003	11EQS04	1	
D6004	10E1	1	
D6005	MA170	1	
D6006	MA151K	1	
D6007	MA153	1	
D6008	MA151K	1	
D6009	11EQS04	1	
D6010	MA153	1	
D6011	10E1	1	
D6012	MA151K	1	
D6013	MA170	1	
D6014	MA151K	1	
D6015,16	MA153	2	
D6017	MA4075M	1	
D6018	MA153	1	
IC2001	MN6743VCRT	1	
IC2003	MN1382-R	1	

Ref.No.	Part No.	Pcs	
IC2004	AN3727S	1	
IC2007	MC14011BF	1	
IC2010	UPC358G2	1	
IC2011	MC14070BF	1	
IC2012	TC7S04F	1	
IC2014	LM393PS	1	
IC2301	AN3815K	1	
IC2302	XRA6435S	1	
IC2304	LM393PS	1	
IC2305	UPC4556G2	1	
IC2307	AN78N12	1	
IC2501,02	LM324NS	2	
IC2503	LM393PS	1	
IC2505	MC14053BF	1	
IC2506	MC14052BF	1	
IC2507	MC14053BF	1	
IC2901	BA6149LS	1	
IC2902	LM393PS	1	
IC6001	MN188241OH8A	1	
IC6002	LM393PS	1	
IC6003	MN1382-R	1	
IC6004	MN1382-U	1	
IC6005	LM324NS	1	
IC6006	M54649L	1	
IC6007	AN78M12	1	
IC6008	UPD4019BG	1	
IC6009	MN1382-R	1	
IC6010	TC4S69F	1	
IC6011	UPC2405HF	1	
IC6012	MC14053BF	1	
J6001	ERJ6GEY0R00	1	
J6004	ERJ6GEY0R00	1	
L2001-05	VLQEL05S101J	5	
L2006	VLQ0129	1	
L2009-16	VLQ0163J221	8	
L2018	VLQ0163J221	1	
L2301,02	VLQEL05S101J	2	
L2304	VLQEL05S101J	1	
L2502	VLQEL05S101J	1	
L2901	VLQEL05S101J	1	
L2902	VLQ0128	1	
L2903-05	ELC10E014	3	
L6001	VLQEL05S101J	1	
L6002	VLQEL05S150J	1	
L6003	VLQEL05S471J	1	
L6004	VLQ0163J221	1	
P2001	VJP1230T	1	
P2301	VJP3078	1	
P2302	VJS1477	1	
P2501	VJS3135	1	
P2901	VJS2149W	1	
P6001	VJS2149W	1	
P6002	VJP3529	1	
P6003	VJS1477	1	
P6004	VJP1230T	1	
P6005-07	VJS3202B020Z	3	
P6008	VJP1230T	1	
Q2001	MSD601-R	1	
Q2901	MSB709-R	1	
Q2902,03	2SD601A	2	
Q2904	2SB1151	1	
Q2905,06	MSB709-R	2	
Q2909	2SB772-R	1	
Q2910,11	MSB709-R	2	
Q2912	2SB772-R	1	
Q2913	MSD601-R	1	
Q2914	2SD1275	1	
Q6001	2SD1474	1	
Q6002,03	MSD601-R	2	
Q6004	2SD973	1	
Q6005	MSB709-R	1	

Ref.No.	Part No.	Pcs	
Q6006	2SB819	1	
Q6007	MSD601-R	1	
Q6008	2SB819	1	
Q6009	MSD601-R	1	
Q6011	2SD636-R	1	
Q6012	MSD601-R	1	
Q6013	2SB819	1	
Q6014	MSD601-R	1	
Q6015	2SD1273	1	
Q6016	MSD601-R	1	
Q6017	2SB941	1	
Q6018	MSD601-R	1	
QR2001-08	MRN1404	8	
QR2501-05	MRN1404	5	
QR2901,02	MRN1404	2	
QR2903,04	MRN2404	2	
QR2905	MRN1404	1	
QR6001	MRN2402	1	
QR6002	MRN2404	1	
QR6003	MRN1403	1	
QR6004	MRN1404	1	
QR6005	MRN1403	1	
QR6006	MRN2402	1	
QR6007	MRN1402	1	
QR6008	DTA143XK	1	
QR6009	MRN1404	1	
QR6010	MRN2402	1	
QR6011-15	MRN1404	5	
R2001	ERJ6GEYJ103	1	
R2002	ERJ6GEYJ102	1	
R2003	ERJ6GEYJ222	1	
R2004	ERJ6GEYJ471	1	
R2008,09	ERJ6GEYJ224	2	
R2014	ERJ6GEYJ223	1	
R2015	ERJ6GEYJ562	1	
R2016	ERJ6GEYJ682	1	
R2017	ERJ6GEYJ103	1	
R2018,19	ERJ6GEYJ223	2	
R2020	ERJ6GEYJ272	1	
R2022	ERJ6GEYJ221	1	
R2023	ERJ6GEYG622	1	
R2025	ERJ6GEYJ224	1	
R2026	ERJ6GEYJ103	1	
R2027	ERJ6GEYJ332	1	
R2030,31	ERJ6GEYJ103	2	
R2032	ERJ6GEY0R00	1	
R2039	ERJ6GEYJ101	1	
R2041	ERJ6GEYJ101	1	
R2043,44	ERJ6GEYJ101	2	
R2045-47	ERJ6GEYG223	3	
R2048	ERJ6GEYG333	1	
R2049	ERJ6GEYG224	1	
R2050	ERJ6GEYJ103	1	
R2051,52	ERJ6GEYJ223	2	
R2053	ERJ6GEYJ102	1	
R2054	ERJ6GEYJ273	1	
R2058,59	ERJ6GEYJ103	2	
R2060,61	ERJ6GEY0R00	2	
R2070	ERJ6GEY0R00	1	
R2072,73	ERJ6GEYG223	2	
R2074	ERJ6GEYJ563	1	
R2075	ERJ6GEY0R00	1	
R2076	ERJ6GEYJ471	1	
R2080,81	ERJ6GEYJ103	2	
R2083	ERJ6GEYJ103	1	
R2301	ERDS2TJ150	1	
R2302	ERX12SJR68	1	
R2303,04	ERDS2TJ150	2	
R2305	ERJ6GEYJ102	1	
R2306	ERJ6GEYJ332	1	
R2307,08	ERJ6GEYJ273	2	
R2309	ERJ6GEYJ122	1	
R2310	ERJ6GEYG242	1	

Ref.No.	Part No.	Pcs	
R2311	ERJ6GEYJ684	1	
R2312	ERJ6GEYG273	1	
R2313	ERDS2TJ330	1	
R2314	ERJ6GEYJ102	1	
R2315	ERDS2TJ330	1	
R2316	ERX12SJR47	1	
R2317	ERDS2TJ330	1	
R2318	ERJ6GEYJ330	1	
R2321	ERJ6GEYJ103	1	
R2323	ERJ6GEYJ103	1	
R2324	ERJ6GEYJ224	1	
R2325-28	ERJ6GEYJ103	4	
R2329,30	ERJ6GEYJ184	2	
R2331	ERJ6GEYJ472	1	
R2334	ERJ6GEYJ472	1	
R2335	ERJ6GEYJ224	1	
R2340,41	ERJ6GEY0R00	2	
R2501	ERJ6GEYJ682	1	
R2502	ERJ6GEYJ334	1	
R2503	ERJ6GEYJ274	1	
R2504	ERJ6GEYJ123	1	
R2505	ERJ6GEYJ334	1	
R2506	ERJ6GEYJ154	1	
R2507-10	ERJ6GEYG104	4	
R2511-15	ERJ6GEYJ104	5	
R2516	ERJ6GEYG393	1	
R2517	ERJ6GEYG223	1	
R2518	ERJ6GEYJ124	1	
R2519,20	ERJ6GEYG124	2	
R2521	ERJ6GEYG154	1	
R2522	ERJ6GEYG104	1	
R2523,24	ERJ6GEYJ102	2	
R2525	ERJ6GEYJ223	1	
R2526	ERJ6GEYJ823	1	
R2901	ERJ6GEYJ563	1	
R2902	ERJ6GEYJ103	1	
R2903	ERJ6GEYJ154	1	
R2904	ERJ6GEYJ562	1	
R2905,06	ERJ6GEYJ103	2	
R2907	ERJ6GEYJ222	1	
R2908	ERJ6GEYJ104	1	
R2909-12	ERJ6GEYJ103	4	
R2913	ERDS2TJ270	1	
R2914	ERG2SJ561	1	
R2915	ERJ6GEYJ104	1	
R2916	ERJ6GEYJ153	1	
R2917-19	ERJ6GEYJ103	3	
R2920	ERJ6GEYJ104	1	
R2921	ERJ6GEYJ222	1	
R2922	ERDS2TJ391	1	
R2923	ERDS2TJ182	1	
R2924	ERJ6GEYJ104	1	
R2925	ERJ6GEYJ153	1	
R2926-28	ERJ6GEYJ103	3	
R2929	ERJ6GEYJ104	1	
R2930	ERJ6GEYJ222	1	
R2931	ERDS2TJ391	1	
R2932	ERDS2TJ182	1	
R2933	ERJ6GEYJ102	1	
R2934,35	ERJ6GEYJ103	2	
R2936	ERJ6GEYJ331	1	
R2937	ERJ6GEYJ103	1	
R2939	ERJ6GEYJ103	1	
R2940	ERJ6GEYJ102	1	
R2941	ERJ6GEYJ331	1	
R2942-44	ERJ6GEYJ271	3	
R2945,46	ERJ6GEYJ103	2	
R2947	ERJ6GEYJ101	1	
R2949-51	ERJ6GEYJ103	3	
R2952	ERJ6GEYJ224	1	
R2953	ERJ6GEYJ103	1	
R2954	ERJ6GEY0R00	1	
R6001,02	ERJ6GEYJ153	2	
R6003	ERJ6GEYJ181	1	
R6004	ERJ6GEYJ122	1	

Ref.No.	Part No.	Pcs	
R6005,06	ERJ6GEYJ103	2	
R6007	ERJ6GEYJ182	1	
R6008	ERDS2TJ181	1	
R6009	ERJ6GEYJ474	1	
R6010	ERJ6GEYJ183	1	
R6011	ERJ6GEYJ102	1	
R6012	ERJ6GEYJ121	1	
R6013	ERJ6GEYJ103	1	
R6014	ERD2FCG220	1	!
R6015	ERJ6GEYJ103	1	
R6016	ERJ6GEYJ272	1	
R6017	ERJ6GEYJ183	1	
R6018,19	ERJ6GEYJ103	2	
R6020	ERJ6GEYJ272	1	
R6021	ERJ6GEYJ471	1	
R6022	ERJ6GEYJ183	1	
R6023	ERJ6GEYJ104	1	
R6024-27	ERJ6GEYJ473	4	
R6028	ERJ6GEYJ223	1	
R6029	ERDS2TJ333	1	
R6030	ERJ6GEYJ103	1	
R6031	ERJ6GEYG102	1	
R6032	ERJ6GEYG302	1	
R6033	ERJ6GEYG102	1	
R6034,35	ERJ6GEYG103	2	
R6036-39	ERJ6GEYJ103	4	
R6040,41	ERJ6GEYJ222	2	
R6042	ERJ6GEYJ102	1	
R6043	ERJ6GEYJ392	1	
R6044	ERJ6GEYJ472	1	
R6045	ERJ6GEYJ103	1	
R6046-50	ERJ6GEYJ473	5	
R6051	ERJ6GEYJ471	1	
R6052-59	ERJ6GEYJ103	8	
R6060-65	ERJ6GEYJ473	6	
R6066	ERJ6GEYJ682	1	
R6067,68	ERJ6GEYJ821	2	
R6069	ERJ6GEYJ682	1	
R6070	ERJ6GEYJ181	1	
R6071	ERJ6GEYJ682	1	
R6072	ERJ6GEYJ562	1	
R6073	ERJ6GEYJ332	1	
R6074	ERJ6GEYJ103	1	
R6075	ERDS2TJ151	1	
R6076	ERJ6GEYJ683	1	
R6077,78	ERG1SJ300	2	
R6079	ERJ6GEYJ473	1	
R6080	ERJ6GEYJ682	1	
R6081	ERDS2TJ331	1	
R6082	ERJ6GEYJ222	1	
R6083	ERJ6GEYJ471	1	
R6084-87	ERJ6GEYJ473	4	
R6088	ERJ6GEYJ471	1	
T6001	EIQ7QF002B	1	
VR2001	EVN49CA00B23	1	
VR2002	EVN49CA00B15	1	
VR2004	EVN49CA00B25	1	
VR2005,06	EVN49CA00B15	2	
X2001	VSX0296	1	
X2901	VSX0136	1	
X6001	VSX0230	1	
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	VIDEO (1)		
C3001	ECUM1H270JCN	1	
C3002	ECUM1H330JCN	1	
C3003	ECEV1HV4R7	1	

Ref.No.	Part No.	Pcs	
C3004,05	ECUM1H103ZFN	2	
C3006	ECUM1H390JCN	1	
C3007	ECEV1CV470S	1	
C3008	ECUM1H103ZFN	1	
C3009	ECUM1H470JCN	1	
C3010	ECEV1EN4R7S	1	
C3011,12	ECEV1CV100S	2	
C3013	ECEV1CV220S	1	
C3014	ECEV1EV4R7S	1	
C3015	ECEV0JV101S	1	
C3016	ECUM1H103ZFN	1	
C3017	ECUM1H104ZFN	1	
C3018	ECUM1H103ZFN	1	
C3020	ECUM1H390JCN	1	
C3023	ECUM1H820JCN	1	
C3024	ECEV0JV101S	1	
C3025	ECUM1H103ZFN	1	
C3026	ECUM1H220JCN	1	
C3027	ECUM1H103ZFN	1	
C3028	ECUM1H121JCN	1	
C3029,30	ECUM1H103ZFN	2	
C3031	ECUM1H390JCN	1	
C3032	ECUM1H391JCN	1	
C3033	ECUM1H103ZFN	1	
C3034	ECEV1HV010S	1	
C3035,36	ECUM1H103ZFN	2	
C3037	ECEV0JV101S	1	
C3038	ECUM1H103ZFN	1	
C3039	ECUM1H391JCN	1	
C3040	ECUM1H221JCN	1	
C3041	ECUM1H180JCN	1	
C3042	ECUM1E104KBN	1	
C3043	ECUM1H103ZFN	1	
C3044	ECUM1H391JCN	1	
C3045	ECUM1H150JCN	1	
C3046	ECUM1H680JCN	1	
C3047	ECEV0JV101S	1	
C3048	ECUM1H103ZFN	1	
C3049	ECUM1H680JCN	1	
C3050	ECUM1H220JCN	1	
C3051	ECUM1H331JCN	1	
C3052	ECUM1H180JCN	1	
C3053	ECUM1H103ZFN	1	
C3054	ECUM1H101JCN	1	
C3055-59	ECUM1H103ZFN	5	
C3060	ECUM1H470JCN	1	
C3061	ECUM1H103ZFN	1	
C3062,63	ECUM1H390JCN	2	
C3064	ECUM1H130JCN	1	
C3065	ECUM1H103ZFN	1	
C3066	ECUM1H150JCN	1	
C3068	ECUM1H120JCN	1	
C3069-72	ECUM1H103ZFN	4	
C3073,74	ECEV1CV470S	2	
C3075	ECUM1H103ZFN	1	
C3076	ECEV0JV101S	1	
C3077	ECEV1HV010S	1	
C3081	ECUM1H680JCN	1	
C3090	ECEV0JV101S	1	
C3091	ECCF1H221JC5	1	
C3093	ECQB1H104JF	1	
C3801	ECUM1H103ZFN	1	
C3802	ECEV0JV470S	1	
C3803	ECUM1E683KBN	1	
C3804	ECUM1H101JCN	1	
C3805,06	ECUM1H104ZFN	2	
C3808	ECUM1H331JCN	1	
C3809	ECUM1H121JCN	1	
C3810	ECUM1H104ZFN	1	
C3812	ECUM1H103ZFN	1	
C3813	ECEV0JV101S	1	
C3814	ECEV1EV4R7S	1	
C3815,16	ECUM1H103ZFN	2	
C3817	ECUM1H104ZFN	1	
C3818	ECUM1H271JCN	1	

Ref.No.	Part No.	Pcs	
C3819	ECUM1H103ZFN	1	
C3820	ECEV0JV470S	1	
C3821	ECUM1H103ZFN	1	
C3824	ECEV1EV4R7S	1	
C3825-28	ECUM1H104ZFN	4	
C3830	ECKF1H103KB	1	
D3001,02	MA151K	2	
D3005-08	MA151K	4	
D3801	MA153	1	
DL3801-03	VLD0229	3	
FL3001	VLF0729	1	
FL3002	ELB4Y012	1	
FL3003	VLF0968	1	
FL3004	ELB5A052	1	
FL3005	ELB4K114	1	
FL3006	ELB4R031	1	
FL3007	ELB4K114	1	
FL3008	ELB4R031	1	
FL3801	VLF0996	1	
FL3802	ELB4M113	1	
IC3001	VCR0300	1	
IC3002	VEFH20A	1	
IC3003	M52054FP	1	
IC3004	UPC2405HF	1	
IC3801	VEFH28C	1	
IC3803	NJM2233BMA	1	
L3001	VLQ0163J121	1	
L3002-04	VLQ0163J101	3	
L3005	VLQ0163J470	1	
L3006	VLQ0319K220	1	
L3007,08	VLQ0163J121	2	
L3011,12	VLQ0163J220	2	
L3013	VLQ0163J151	1	
L3014	VLQ0163J6R8	1	
L3015	VLQ0163J4R7	1	
L3016,17	VLQ0163J151	2	
L3018	VLQ0163J181	1	
L3019	VLQ0163J390	1	
L3020	VLQ0319K220	1	
L3021	VLQ0163J180	1	
L3022	VLQ0163J181	1	
L3023	VLQ0163J220	1	
L3024	VLQ0163J100	1	
L3025,26	VLQ0163J390	2	
L3027	VLQ0163J150	1	
L3029	VLQ0163J100	1	
L3030	VLQ0163J101	1	
L3032	VLQEL05F550J	1	
L3801	VLQ0133J821	1	
L3802	VLQ0163J151	1	
L3803	VLQ0133J391	1	
L3805	VLQ0163J220	1	
L3806	VLQ0319K220	1	
L3807-12	VLQ0163J150	6	
L3813	VLQ0319K220	1	
L3815	VLQEL05F681J	1	
P3001	VJP3176B650	1	
P3002	VJP3079	1	
Q3001	MSC2295-	1	
Q3002	MSD601-R	1	
Q3003,04	MSC2295-	2	
Q3007	MSC2295-	1	
Q3008,09	MSD601-R	2	
Q3010,11	MSC2295-	2	
Q3012	MSD601-R	1	
Q3013	MSC2295-	1	
Q3014	MSB709-R	1	
Q3015	MSD601-R	1	

Ref.No.	Part No.	Pcs	
Q3016	MSC2295-B	1	
Q3017	MSD601-R	1	
Q3018	2SD1330	1	
Q3019	MRN1404	1	
Q3022	MSD601-R	1	
Q3801	MSC2295-B	1	
Q3802	MSD601-R	1	
Q3803	MSC2295-B	1	
Q3804	MSB709-R	1	
Q3805	MSC2295-B	1	
Q3806-09	MSB709-R	4	
Q3811	MSD601-R	1	
QR3002-04	MRN1404	3	
QR3005	MRN2404	1	
QR3006,07	MRN1404	2	
QR3009	MRN1403	1	
QR3010	MRN1404	1	
QR3011	MRN2404	1	
QR3012,13	MRN1404	2	
QR3801,02	MRN1404	2	
R3001	ERJ6GEYJ561	1	
R3002	ERJ6GEYJ471	1	
R3003	ERJ6GEYJ911	1	
R3004	ERJ6GEYJ682	1	
R3005	ERJ6GEYJ821	1	
R3006	ERJ6GEYJ102	1	
R3007	ERJ6GEYJ911	1	
R3008	ERJ6GEYJ152	1	
R3010	ERJ6GEYJ273	1	
R3011	ERJ6GEYJ333	1	
R3012	ERJ6GEYJ822	1	
R3013	ERJ6GEYJ682	1	
R3014	ERJ6GEYJ103	1	
R3015	ERJ6GEYJ153	1	
R3016,17	ERJ6GEYJ821	2	
R3023	ERJ6GEYJ102	1	
R3025	ERJ6GEYJ272	1	
R3026,27	ERJ6GEYJ223	2	
R3029	ERJ6GEYJ182	1	
R3031	ERJ6GEYJ393	1	
R3033	ERJ6GEYJ822	1	
R3034	ERJ6GEYJ123	1	
R3035	ERJ6GEY0R00	1	
R3036	ERJ6GEYJ103	1	
R3037	ERJ6GEYJ330	1	
R3038	ERJ6GEYJ272	1	
R3039	ERJ6GEYJ332	1	
R3040	ERJ6GEYJ471	1	
R3041	ERJ6GEYJ331	1	
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R3043	ERJ6GEYJ561	1	
R3044	ECUM1H221JCN	1	
R3045	ERJ6GEYJ333	1	
R3046	ERJ6GEYJ471	1	
R3047	ERJ6GEYJ431	1	
R3048	ERJ6GEY0R00	1	
R3049,50	ERJ6GEYJ102	2	
R3051	ERJ6GEYJ471	1	
R3052	ERJ6GEYJ101	1	
R3053	ERJ6GEYJ152	1	
R3054	ERJ6GEYJ103	1	
R3055	ERJ6GEYJ562	1	
R3056	ERJ6GEYJ182	1	
R3058	ERJ6GEYJ102	1	
R3059	ERJ6GEYJ561	1	
R3060,61	ERJ6GEYJ102	2	
R3062	ERJ6GEYJ271	1	
R3063	ERJ6GEYJ102	1	
R3064	ERJ6GEYJ103	1	
R3065	ERJ6GEYJ223	1	
R3066	ERJ6GEYJ182	1	
R3067	ERJ6GEYJ561	1	
R3068	ERJ6GEYJ102	1	

Ref.No.	Part No.	Pcs	
R3069	ERJ6GEYJ561	1	
R3070	ERJ6GEYJ681	1	
R3071	ERJ6GEYJ103	1	
R3072,73	ERJ6GEYJ471	2	
R3075	ERJ6GEYJ562	1	
R3076	ERJ6GEYJ123	1	
R3077	ERJ6GEYJ473	1	
R3078	ERJ6GEYJ183	1	
R3079	ERJ6GEYJ331	1	
R3080	ERJ6GEYJ152	1	
R3081,82	ERJ6GEYJ223	2	
R3083	ERJ6GEYJ331	1	
R3084	ERJ6GEYJ471	1	
R3085	ERJ6GEYJ152	1	
R3086	ERJ6GEYJ562	1	
R3087	ERJ6GEYJ122	1	
R3088	ERJ6GEYJ152	1	
R3089	ERJ6GEYJ391	1	
R3090	ERJ6GEYJ471	1	
R3091	ERJ6GEYJ102	1	
R3092	ERJ6GEYJ152	1	
R3093	ERJ6GEY0R00	1	
R3094	ERJ6GEYJ472	1	
R3097	ERJ6GEY0R00	1	
R3098	ERJ6GEYJ223	1	
R3103	ERJ6GEYJ271	1	
R3104	ERJ6GEYJ183	1	
R3105	ERJ6GEYJ272	1	
R3106	ERJ6GEYJ223	1	
R3107	ERJ6GEYJ103	1	
R3108	ERJ6GEYJ332	1	
R3109	ERJ6GEYJ561	1	
R3110	ERJ6GEYJ471	1	
R3113	ERJ6GEY0R00	1	
R3115,16	ERJ6GEYJ102	2	
R3117	ERJ6GEYJ152	1	
R3118,19	ERJ6GEYJ223	2	
R3120	ERDS2TJ302	1	
R3801	ERJ6GEYJ102	1	
R3802	ERJ6GEYJ223	1	
R3804	ERJ6GEYJ103	1	
R3805	ERJ6GEYJ122	1	
R3806	ERJ6GEYJ822	1	
R3807	ERJ6GEYJ223	1	
R3808	ERJ6GEYJ561	1	
R3809	ERJ6GEYJ102	1	
R3810	ERJ6GEYJ271	1	
R3811	ERJ6GEYJ102	1	
R3812,13	ERJ6GEYJ223	2	
R3814,15	ERJ6GEYJ182	2	
R3816,17	ERJ6GEYJ102	2	
R3818	ERJ6GEYJ152	1	
R3819	ERJ6GEYJ102	1	
R3820,21	ERJ6GEYJ223	2	
R3822-26	ERJ6GEYJ102	5	
R3827	ERJ6GEYJ473	1	
R3828	ERJ6GEYJ102	1	
R3829	ERJ6GEYJ331	1	
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R3836	ERJ6GEYJ472	1	
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R3838	ERJ6GEYJ560	1	
R3839	ERJ6GEYJ472	1	
R3840	ERJ6GEY0R00	1	
R3841	ERJ6GEYJ393	1	
R3842	ERJ6GEYJ103	1	
R3843	ERJ6GEYJ561	1	
R3844	ERJ6GEYJ223	1	
R3845	ERJ6GEYJ102	1	
R3850	ERJ6GEYJ561	1	

Ref.No.	Part No.	Pcs	
R3851	ERJ6GEYJ330	1	
R3852	ERJ6GEYJ223	1	
VR3001	EVM7JSX30B13	1	
VR3002	EVM7DGA00B52	1	
VR3003	EVM7DGA00B53	1	
VR3004	EVM7DGA00B14	1	
VR3005	EVM7JSX30B24	1	
VR3006	EVM7DGA00B54	1	
VR3007	EVM7JSX30B14	1	
VR3008,09	EVM7DGA00B23	2	
VR3801-03	EVM7JSX30B52	3	
VR3804	EVM7JSX30B15	1	
VR3805,06	EVM7JSX30B54	2	
X3801	VSX0160	1	
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C3301	ECEV0JV470S	1	
C3302	ECUM1H103ZFN	1	
C3303	ECUM1H121JCN	1	
C3304,05	ECUM1H220JCN	2	
C3306	ECEV1HVR22S	1	
C3307	ECUM1H270JCN	1	
C3308	ECUM1H080DCN	1	
C3309	ECUM1H103ZFN	1	
C3310	ECEV0JV101S	1	
C3311	ECEV1HV4R7	1	
C3312	ECUM1E683KBN	1	
C3313	ECUM1H471JCN	1	
C3314	ECUM1H561JCN	1	
C3315	ECUM1H103ZFN	1	
C3316	ECUM1C334KBM	1	
C3317	ECEV1EV330S	1	
C3318	ECUM1H392KBN	1	
C3319	ECUM1H152KBN	1	
C3320	ECEV1HVR47S	1	
C3321	ECEV1HVR22S	1	
C3322	ECUM1H821JCN	1	
C3323	ECEV1HN4R7S	1	
C3324	ECEV1HN010S	1	
C3325,26	ECUM1H103ZFN	2	
C3327	ECEV0JV101S	1	
C3328	ECUM1H103ZFN	1	
C3329	ECEV1CV470S	1	
C3330	ECUM1H103ZFN	1	
C3332	ECEV1HV4R7	1	
C3333	ECUM1H103ZFN	1	
C3334	ECEV0JV101S	1	
C3335	ECEV0JV470S	1	
C3336	ECEV1CV470S	1	
C3337,38	ECUM1H103ZFN	2	
C3339	ECEV0JV101S	1	
C3340,41	ECUM1H103ZFN	2	
C3342,43	ECEV1EN4R7S	2	
C3344	ECEV1EV4R7S	1	
C3345	ECEV0JV470S	1	
C3346	ECUM1H103ZFN	1	
C3347	ECEV0JV101S	1	
C3348	ECEV0GV221S	1	
C3349	ECEV1CV100S	1	
C3350	ECEV0GV221S	1	
C3351	ECEV1CV100S	1	
C3352,53	ECUM1H103ZFN	2	
C3354	ECEV0JV101S	1	
C3355	ECUM1H103ZFN	1	
C3356	ECEV0JV101S	1	
C3357	ECEV1HV010S	1	
C3358	ECUM1C334KBM	1	

Ref.No.	Part No.	Pcs	
C3359,60	ECUM1C105ZFN	2	
C3361	ECUM1C334KBM	1	
C3362-65	ECUM1E473KBN	4	
C3366	ECUM1H103ZFN	1	
C3367	ECEV1HN010S	1	
C3368	ECUM1H153KBN	1	
C3369	ECUM1H471JCN	1	
C3370	ECUM1H151JCN	1	
C3371-75	ECUM1H103ZFN	5	
C3378-80	ECUM1H103ZFN	3	
C3381	ECUM1E273KBN	1	
C3382	ECUM1H271JCN	1	
C3383,84	ECUM1H103ZFN	2	
C3385	ECEV0JV101S	1	
C3386-89	ECUM1H103ZFN	4	
C3390	ECEV0JN470S	1	
C3391	ECEV0JV470S	1	
C3392	ECEV1HV4R7	1	
C3395	ECUM1H103ZFN	1	
C3396	ECEV0JV101S	1	
C3398	ECUM1H104ZFN	1	
C3399-01	ECUM1H102JCN	3	
C3403,04	ECEV0GV221S	2	
C3405	ECUM1H103ZFN	1	
C3407	ECEV1CV100S	1	
C3408	ECEV0JV101S	1	
C3409	ECEV1CV470S	1	
C3410	ECUM1H103ZFN	1	
C3411	ECV1ZW40X60	1	
C3412	ECUM1H103ZFN	1	
D3301-04	MA151K	4	
FL3301	VLF1024	1	
FL3302	ELB4S049	1	
FL3303	VLD0129	1	
IC3301	M50458-001FP	1	
IC3302	MN1382-R	1	
IC3303	AN3296S	1	
IC3304	M52065FP	1	
IC3305	AN3581S	1	
IC3306	M52350FP	1	
IC3308	UPC2405HF	1	
IC3309	UPC78L05J	1	
IC3310	NJM2233BMA	1	
L3301,02	VLQ0163J220	2	
L3303	VLQ0163J150	1	
L3305-07	VLQ0163J220	3	
L3308	VLQ0319K220	1	
L3312-14	VLQ0163J220	3	
P3301	VJP3176B050	1	
Q3301	MSB709-R	1	
Q3302-05	MSD601-R	4	
Q3306	2SA1022-B	1	
Q3307,08	MSC2295-B	2	
Q3309	2SA1022-B	1	
Q3310,11	MSD601-R	2	
Q3312	MSB709-R	1	
Q3313-15	MSD601-R	3	
Q3316	MSB709-R	1	
Q3319	MSD601-R	1	
Q3321	MSD601-R	1	
Q3322	MSC2295-B	1	
Q3323	MSD601-R	1	
Q3324	MSC2295-B	1	
Q3325,26	MSD601-R	2	
Q3328	MSD601-R	1	
QR3301-03	MRN1404	3	
R3301,02	ERJ6GEYJ562	2	

Ref.No.	Part No.	Pcs	
R3303	ERJ6GEYJ102	1	
R3304	ERJ6GEYJ152	1	
R3305	ERJ6GEYJ391	1	
R3306	ERJ6GEYJ152	1	
R3307	ERJ6GEYJ222	1	
R3308	ERJ6GEYJ103	1	
R3309	ERJ6GEYJ684	1	
R3310	ERJ6GEYJ753	1	
R3311	ERJ6GEYJ103	1	
R3312	ERJ6GEYJ102	1	
R3313	ERJ6GEYJ473	1	
R3314	ERJ6GEYJ331	1	
R3315	ERJ6GEYJ683	1	
R3316	ERJ6GEYJ104	1	
R3317	ERJ6GEYJ103	1	
R3318	ERJ6GEYJ332	1	
R3319	ERJ6GEYJ564	1	
R3320	ERJ6GEYJ333	1	
R3321	ERJ6GEYJ223	1	
R3322,23	ERJ6GEYJ222	2	
R3324	ERJ6GEYJ392	1	
R3325	ERJ6GEYJ223	1	
R3326	ERJ6GEYJ681	1	
R3328	ERJ6GEYJ561	1	
R3329	ERJ6GEYJ122	1	
R3330	ERJ6GEYJ561	1	
R3331	ERJ6GEYJ102	1	
R3332	ERJ6GEYJ621	1	
R3333	ERJ6GEYJ272	1	
R3334,35	ERJ6GEYJ102	2	
R3336	ERJ6GEYJ563	1	
R3337	ERJ6GEYJ332	1	
R3338	ERJ6GEYJ223	1	
R3339-41	ERJ6GEYJ222	3	
R3342	ERJ6GEY0R00	1	
R3344	ERJ6GEYJ122	1	
R3345	ERJ6GEYJ102	1	
R3346	ERJ6GEYJ472	1	
R3347,48	ERJ6GEYJ102	2	
R3349	ERJ6GEYJ152	1	
R3351	ERJ6GEYJ122	1	
R3352	ERJ6GEYJ102	1	
R3353	ERJ6GEYJ122	1	
R3354	ERJ6GEYJ332	1	
R3355	ERJ6GEYJ103	1	
R3356	ERJ6GEYJ101	1	
R3357	ERJ6GEYJ152	1	
R3358	ERJ6GEYJ222	1	
R3359	ERJ6GEYJ221	1	
R3360,61	ERJ6GEYJ102	2	
R3369	ERJ6GEYJ152	1	
R3370	ERJ6GEYJ112	1	
R3371	ERJ6GEYJ152	1	
R3372	ERJ6GEYJ132	1	
R3373	ERJ6GEYJ561	1	
R3374	ERJ6GEYJ474	1	
R3375	ERJ6GEYJ122	1	
R3376	ERJ6GEYJ102	1	
R3377	ERJ6GEYJ224	1	
R3378	ERJ6GEYJ223	1	
R3379	ERJ6GEYJ103	1	
R3380	ERJ6GEYJ563	1	
R3381,82	ERJ6GEYJ472	2	
R3383	ERJ6GEYJ154	1	
R3384	ERJ6GEYJ683	1	
R3385	ERJ6GEYJ682	1	
R3386	ERJ6GEYJ332	1	
R3388	ERJ6GEYJ113	1	
R3389	ERJ6GEYJ562	1	
R3390	ERJ6GEYJ472	1	
R3391	ERJ6GEYJ102	1	
R3392	ERJ6GEY0R00	1	
R3393	ERJ6GEYJ223	1	
R3394	ERJ6GEYJ473	1	
R3398,99	ERJ6GEYJ102	2	

Ref.No.	Part No.	Pcs	
R3400	ERJ6GEYJ821	1	
R3401	ERJ6GEYJ681	1	
R3402	ERJ6GEYJ183	1	
R3403	ERJ6GEYJ333	1	
R3404	ERJ6GEYJ222	1	
R3405	ERJ6GEYJ391	1	
R3406	ERJ6GEYJ471	1	
R3407	ERJ6GEYJ102	1	
R3408	ERJ6GEYJ183	1	
R3409	ERJ6GEYJ333	1	
R3410	ERTD2FHK202S	1	
R3411	ERJ6GEYJ393	1	
R3412	ERJ6GEYJ333	1	
R3413	ERJ6GEYJ105	1	
R3414	ERJ6GEYJ102	1	
R3416	ERJ6GEYJ331	1	
R3423	ERJ6GEYJ330	1	
R3425	ERJ6GEYJ153	1	
R3426	ERJ6GEYJ682	1	
R3428-30	ERJ6GEYJ472	3	
R3432	ERJ6GEYJ333	1	
R3433	ERJ6GEYJ223	1	
R3435-37	ERJ6GEYJ750	3	
VR3301	EVM7DGA00B24	1	
VR3302,03	EVM7DGA00B54	2	
VR3304	EVM7DGA00B13	1	
X3301	VSX0197	1	
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	VIDEO (3)		
C8001	ECUM1H103ZFN	1	
C8002,03	ECEV0JV470S	2	
C8004	ECUM1H270JCN	1	
C8005	ECUM1H103ZFN	1	
C8006	ECEV0JV470S	1	
C8007	ECUM1H220JCN	1	
C8008	ECUM1H103ZFN	1	
C8009	ECEV1CV470S	1	
C8010	ECEV0JV470S	1	
C8011	ECUM1H103ZFN	1	
C8012	ECEV1CV470S	1	
C8013	ECEV1HV010S	1	
C8014	ECUM1H103ZFN	1	
C8015	ECEV0JV101S	1	
C8017	ECUM1H103ZFN	1	
C8018	ECEV0JV101S	1	
C8019-21	ECUM1H103ZFN	3	
C8023,24	ECUM1H103ZFN	2	
C8025	ECUM1H060DCN	1	
C8026	ECUM1H103ZFN	1	
C8027	ECEV0JV470S	1	
C8028	ECEV1EV4R7S	1	
C8029	ECUM1H102JCN	1	
C8031,32	ECUM1H103ZFN	2	
C8033	ECEV0JV470S	1	
C8034	ECUM1H103ZFN	1	
C8035	ECUM1H104ZFN	1	
C8036	ECEV0JV470S	1	
C8037	ECUM1H220JCN	1	
C8038	ECUM1H080DCN	1	
C8039	ECUM1H010CCN	1	
C8040	ECUM1H100DCN	1	
C8041,42	ECUM1H220JCN	2	
C8043	ECUM1H080DCN	1	
C8044	ECUM1H010CCN	1	
C8045	ECUM1H100DCN	1	
C8046	ECUM1H220JCN	1	
C8047	ECUM1H103ZFN	1	

Ref.No.	Part No.	Pcs	
C8048	ECEV0JV470S	1	
C8049	ECUM1H103ZFN	1	
C8050	ECEV1CV100S	1	
C8051	ECUM1H103ZFN	1	
C8052	ECEV1CV100S	1	
C8053,54	ECUM1C334KBM	2	
C8056	ECUM1H103ZFN	1	
C8057	ECEV1CV470S	1	
C8058-60	ECUM1H103ZFN	3	
C8061	ECUM1H104ZFN	1	
C8062	ECEV1HVR47SR	1	
C8063	ECUM1C105ZFN	1	
C8064	ECEV1HV010S	1	
C8065	ECUM1H103ZFN	1	
C8066	ECEV0JV470S	1	
C8067	ECUM1C105ZFN	1	
C8068	ECUM1H103ZFN	1	
C8069	ECEV1HVR47S	1	
C8070	ECUM1H104ZFN	1	
C8071	ECUM1H103ZFN	1	
C8072	ECEV0JV470S	1	
C8073,74	ECUM1C334KBM	2	
C8093	ECEV1CV470S	1	
C8094	ECUM1H103ZFN	1	
C8096-99	ECEV0JV470S	4	
C8100	ECUM1H103ZFN	1	
C8101	ECUM1H120JCN	1	
D8001	MA151K	1	
D8002	MA151WK	1	
D8003	11EQS04	1	
FL8001	VLF0523	1	
FL8002	ELB4R053	1	
FL8003,04	VLF0965	2	
IC8001	NJM2233BMA	1	
IC8002	UPC2405HF	1	
IC8004	TC7WU04F	1	
IC8005	MC74HC541F	1	
IC8006	HM63021FP	1	
IC8007	MC74HC74AF	1	
IC8008	TC7S32F	1	
IC8009	MC74HC00AF	1	
IC8010	MST003MS	1	
IC8011	MC141625AFU	1	
IC8012	TL8822F	1	
L8001-03	VLQ0163J470	3	
L8004	VLQ0163J180	1	
L8005	VLQ0163J220	1	
L8006	VLQ0163J150	1	
L8007	VLQ0163J180	1	
L8008	VLQ0163J220	1	
L8009	VLQ0163J150	1	
L8010-12	VLQ0163J470	3	
L8013-15	VLQ0163J220	3	
P8001	VJP3176B050	1	
Q8001	MSC2295-B	1	
Q8002	2SA1022-B	1	
Q8003	MSD601-R	1	
Q8004	MSC2295-B	1	
Q8005	2SA1022-B	1	
Q8006	MSD601-R	1	
Q8007	MSC2295-B	1	
Q8008,09	MSB709-R	2	
Q8010-15	MSD601-R	6	
Q8016	MSC2295-B	1	
Q8017	MSD601-R	1	
Q8018,19	MSC2295-B	2	
Q8020	MSD601-R	1	
QR8002-06	MRN1404	5	

Ref.No.	Part No.	Pcs	
R8001	ERJ6GEYJ153	1	
R8002	ERJ6GEYJ333	1	
R8003	ERJ6GEYJ331	1	
R8004	ERJ6GEYJ561	1	
R8005	ERJ6GEYJ102	1	
R8006	ERJ6GEYJ272	1	
R8007	ERJ6GEYJ152	1	
R8008	ERJ6GEYJ153	1	
R8009	ERJ6GEYJ333	1	
R8010	ERJ6GEYJ561	1	
R8011	ERJ6GEYJ102	1	
R8012,13	ERJ6GEYJ272	2	
R8014	ERJ6GEYJ102	1	
R8015	ERJ6GEYJ330	1	
R8016	ERJ6GEYJ223	1	
R8017	ERJ6GEYJ103	1	
R8018-33	ERJ6GEYJ680	16	
R8052	ERJ6GEY0R00	1	
R8053	ERJ6GEYJ471	1	
R8054	ERJ6GEYJ122	1	
R8056	ERJ6GEYJ331	1	
R8057	ERJ6GEYJ432	1	
R8058	ERJ6GEYJ272	1	
R8059	ERJ6GEYJ473	1	
R8060-62	ERJ6GEYJ680	3	
R8063	ERJ6GEYJ103	1	
R8065	ERJ6GEYJ103	1	
R8067	ERJ6GEYJ103	1	
R8068	ERJ6GEYJ754	1	
R8069	ERJ6GEYJ102	1	
R8070	ERJ6GEYJ152	1	
R8071	ERJ6GEYJ103	1	
R8072	ERJ6GEYJ102	1	
R8073,74	ERJ6GEYJ152	2	
R8075	ERJ6GEYJ911	1	
R8076,77	ERJ6GEYJ223	2	
R8078	ERJ6GEYJ222	1	
R8079	ERJ6GEYJ102	1	
R8080	ERJ6GEYJ470	1	
R8081	ERJ6GEYJ222	1	
R8082,83	ERJ6GEYJ102	2	
R8084	ERJ6GEYJ681	1	
R8085	ERJ6GEYJ222	1	
R8086	ERJ6GEYJ102	1	
R8087	ERJ6GEYJ222	1	
R8088,89	ERJ6GEYJ102	2	
R8090	ERJ6GEYJ223	1	
R8091	ERJ6GEYJ333	1	
R8092	ERJ6GEYJ102	1	
R8093	ERJ6GEYJ152	1	
R8094	ERJ6GEYJ102	1	
R8095	ERJ6GEYJ330	1	
R8096,97	ERJ6GEYJ102	2	
R8098	ERJ6GEYJ223	1	
R8099	ERJ6GEYJ333	1	
R8100	ERJ6GEYJ102	1	
R8101	ERJ6GEYJ122	1	
R8102	ERJ6GEYJ223	1	
R8103	ERJ6GEYJ333	1	
R8104,05	ERJ6GEYJ102	2	
R8106	ERJ6GEYJ272	1	
R8107	ERJ6GEYJ182	1	
R8108	ERJ6GEYJ102	1	
R8109	ERJ6GEYJ153	1	
R8110	ERJ6GEYJ333	1	
VR8001,02	EVM7DSX04B23	2	
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	AUDIO		

Ref.No.	Part No.	Pcs	
C401,02	ECEV1CAN4R7	2	
C405	ECHU1C682J	1	
C406	ECUM1H102JN	1	
C407	ECHU1C223J	1	
C408	ECEV1EA100	1	
C409	ECHU1C223J	1	
C410	ECEV1EA4R7	1	
C411	ECEV1CA470P	1	
C412	ECHU1C103J	1	
C413	ECUM1H332KBN	1	
C414-16	ECUM1H102KBN	3	
C417	ECEV1EA4R7	1	
C418	ECWV1E104JS	1	
C419	ECUM1H103ZFN	1	
C420	ECUM1H101JCN	1	
C421-23	ECUM1H103ZFN	3	
C424	ECWV1E154JS	1	
C425	ECWV1E104JS	1	
C426	ECUM1H331JCN	1	
C427	ECUM1H102JN	1	
C428	ECUM1H103ZFN	1	
C431	ECUM1H103ZFN	1	
C432	ECUM1H101JCN	1	
C433	ECUM1H103ZFN	1	
C434	ECWV1E104JS	1	
C435	ECEV1EA4R7	1	
C436-38	ECUM1H102KBN	3	
C439	ECUM1H332KBN	1	
C440	ECHU1C103J	1	
C441	ECEV1CA470P	1	
C442	ECEV1EA4R7	1	
C443	ECHU1C223J	1	
C444	ECEV1EA100	1	
C445	ECUM1H102JN	1	
C446	ECHU1C223J	1	
C447	ECHU1C682J	1	
C449	ECEV1HA010	1	
C450-52	ECEV1HA3R3	3	
C453,54	ECEV1CA100	2	
C455	ECEV1CA470P	1	
C456	ECEV1HA010	1	
C457	ECEV1CA220	1	
C458	ECUM1H103ZFN	1	
C459,60	ECEV0JA470	2	
C461,62	ECEV1HA010	2	
C463	ECWV1E124JS	1	
C4001-03	ECEV1CV100S	3	
C4004	ECUX1C104ZF	1	
C4005	ECEA1CU471	1	
C4006	ECEV1CV470S	1	
C4007	ECEV0JV101S	1	
C4008	ECEV1HV010S	1	
C4009,10	ECEV1CV100S	2	
C4011	ECEV1HV010S	1	
C4027	ECEV1EV330S	1	
C4028	ECEV1CV470S	1	
C4029	ECEV1HV010S	1	
C4030	ECHU1C183J	1	
C4031	ECEV1CV100S	1	
C4032	ECHU1C153J	1	
C4033,34	ECHU1C472J	2	
C4035	ECHU1C683J	1	
C4036	ECEV1CV470S	1	
C4037	ECEV1HV010S	1	
C4038	ECST1CC106Z	1	
C4039	ECEV0JV101S	1	
C4040	ECHU1C223J	1	
C4041	ECHU1C122J	1	
C4042	ECHU1C153J	1	
C4043	ECEV1CV470S	1	
C4044	ECEV1EV330S	1	
C4045	ECEV1CV470S	1	
C4046	ECEV1HV010S	1	
C4047	ECHU1C183J	1	

Ref.No.	Part No.	Pcs	
C4048	ECHU1C153J	1	
C4049	ECEV1CV100S	1	
C4050	ECHU1C683J	1	
C4051	ECEV1CV100S	1	
C4052	ECEV1CV470S	1	
C4053	ECST1CC106Z	1	
C4054	ECEV1CV470S	1	
C4055	ECEV1HV010S	1	
C4056	ECHU1C103J	1	
C4057	ECEV0JV101S	1	
C4058	ECHU1C223J	1	
C4059	ECHU1C122J	1	
C4060	ECHU1C153J	1	
C4061	ECEV1CV470S	1	
C4062-67	ECST1CC106Z	6	
C4068	ECEV1CV470S	1	
C4069	ECEV1CV100S	1	
C4070	ECEV1HNR47S	1	
C4071	ECEV1CV100S	1	
C4072	ECQB1H332JF	1	
C4073	ECQB1H682JF	1	
C4074	ECQF6182KZ	1	
C4075,76	ECCD2H151J	2	
C4077-80	ECQB1H473JF	4	
C4081	ECHU1C103J	1	
C4082	ECUX1H103ZF	1	
C4083	ECEV1CV470S	1	
C4084,85	ECST1CC106Z	2	
C4086	ECEV1CV470S	1	
C4087,88	ECEV1CV100S	2	
C4089,90	ECEV1EV4R7S	2	
C4501-03	ECUX1H103ZFV	3	
C4504	ECEV1CV470S	1	
C4505	ECUX1H103ZFV	1	
C4506	ECEV1CV470S	1	
C4507	ECUX1H103ZFV	1	
C4508,09	ECST1CC106Z	2	
C4510	ECEV1CV220S	1	
C4511	ECEV1CV470S	1	
C4512	ECEV0JV101S	1	
C4513	ECUX1H103ZFV	1	
C4515,16	ECEV1HV010S	2	
C4517	ECEV0JV101S	1	
C4518	ECEV1CV470S	1	
C4519	ECQB1H823JF	1	
C4520	ECUX1H103ZFV	1	
C4521	ECEV1EV330S	1	
C4522	ECUX1H103ZFV	1	
C4523	ECST1CC106Z	1	
C4524	ECUX1H103ZFV	1	
C4525-27	ECST1CC106Z	3	
C4528	ECUX1H103ZFV	1	
C4529	ECST1CC106Z	1	
C4530	ECUX1H103ZFV	1	
C4531,32	ECEV1CV100S	2	
C4533,34	ECUX1C104ZFV	2	
C4535	ECST1CC106Z	1	
C4536-38	ECEV1CV100S	3	
C4539	ECST1CC106Z	1	
C4540	ECEV1CV100S	1	
C4541	ECUX1H103ZFV	1	
C4543	ECEV1CV470S	1	
D401	MA720	1	
D4001	MA3056-	1	
D4002	MA151K	1	
D4005,06	MA151K	2	
D4007	MA151WK	1	
D4008	MA151WA	1	
D4009,10	MA151K	2	
D4501	MA153	1	
FL4001,02	VLF0402	2	
FL4501	VLF0696	1	

Ref.No.	Part No.	Pcs	
IC401	BA7705K1	1	
IC4001	M52055FP	1	
IC4002,03	LA7296	2	
IC4006	NJM4558M	1	
IC4501	MC14053BF	1	
IC4502,03	NJM4558M	2	
IC4504	UPC78N05H	1	
IC4505	VEP04353B	1	
IC4506	AN3912	1	
IC4507	MC14053BF	1	
IC4508	NJM4558M	1	
IC4509	NJM4565MD	1	
IC4510	BA6138	1	
IC4511	MC14066BF	1	
L401	VLQ0163J101	1	
L403	VLQ0163J101	1	
L4001	VLQEL07F153J	1	
L4004	VLQEL07F153J	1	
L4007	VLQ24F102K25	1	
L4501	VLQ0163J101	1	
P4001	VJP1230R	1	
P4002	VJP1230T	1	
P4003	VJP1231T	1	
P4501	VJP3176B050	1	
P4502	VJP3079	1	
Q401,02	2SD1328-R	2	
Q4001	MSD602-R	1	
Q4007,08	MSD601-R	2	
Q4009,10	2SB792-R	2	
Q4011	MSB710-R	1	
Q4012	2SD973A-R	1	
Q4013,14	2SB710A-R	2	
Q4015-18	2SD814-R	4	
Q4019-22	2SD1938	4	
Q4501	MSB710-R	1	
Q4502	MSB709-R	1	
Q4503	MSD602-R	1	
Q4504,05	MSD601-R	2	
Q4506-10	2SD1328-R	5	
QR401	UN2113	1	
QR403	UN2213	1	
QR404	UN2113	1	
QR4001,02	UN5113	2	
QR4003	UN5211	1	
QR4004	UN5113	1	
QR4005	UN5211	1	
QR4006	UN5113	1	
QR4015	UN5213	1	
QR4016	UN5215	1	
QR4017,18	UN5213	2	
QR4019	UN5215	1	
QR4020	UN5213	1	
QR4021-24	UN5215	4	
QR4025	MRN1402	1	
QR4026,27	MRN1403	2	
QR4028,29	UN5113	2	
QR4030	UN5212	1	
QR4031,32	UN5213	2	
QR4501	UN5213	1	
QR4502	UN5212	1	
QR4503	UN5211	1	
QR4504	XN1501	1	
QR4505,06	UN5213	2	
R403,04	ERJ6GEYG821	2	
R406	ERJ6GEYG681	1	
R407	ERJ6GEYJ112	1	
R408	ERJ6GEYJ103	1	
R409	ERJ6GEYG183	1	
R410	ERJ6GEYG562	1	

Ref.No.	Part No.	Pcs	
R411	ERJ6GEYJ104	1	
R412	ERJ6GEYJ303	1	
R413	ERJ6GEYJ822	1	
R414	ERJ6GEYJ105	1	
R415	ERJ6GEYG163	1	
R416	ERJ6GEYJ393	1	
R417	ERJ6GEYJ113	1	
R418	ERJ6GEYJ223	1	
R420	ERJ6GEYJ103	1	
R421	ERJ6GEYJ123	1	
R422	ERJ6GEYJ303	1	
R423	ERJ6GEYJ104	1	
R424	ERJ6GEYG562	1	
R425	ERJ6GEYG183	1	
R426	ERJ6GEYJ103	1	
R427	ERJ6GEYJ112	1	
R428	ERJ6GEYG681	1	
R429	ERJ6GEYG821	1	
R431	ERJ6GEYG821	1	
R433	ERJ6GEYJ333	1	
R434	ERJ6GEYJ331	1	
R435	ERJ6GEYJ102	1	
R436	ERJ6GEYJ223	1	
R437	ERJ6GEYJ331	1	
R438	ERJ6GEYJ102	1	
R439	ERJ6GEYJ223	1	
R440	ERJ6GEYJ225	1	
R441	ERJ6GEYJ223	1	
R442,43	ERJ6GEYJ182	2	
R4001-03	ERJ3GEYJ104	3	
R4004	ERJ3GEYJ103	1	
R4005	ERJ3GEYJ821	1	
R4006,07	ERJ3GEYJ682	2	
R4008,09	ERJ3GEYG123	2	
R4019,20	ERJ3GEYJ103	2	
R4051	ERJ3GEYJ104	1	
R4052	VRE0034E123	1	
R4053	ERJ3GEYJ391	1	
R4054	ERJ3GEYJ331	1	
R4055	ERJ3GEYG222	1	
R4056,57	ERJ3GEYJ103	2	
R4058	ERJ3GEYJ564	1	
R4059	ERJ3GEYG331	1	
R4060	ERJ3GEYJ683	1	
R4061	ERJ3GEYJ334	1	
R4062	ERJ3GEYJ683	1	
R4063	ERJ3GEYJ121	1	
R4064	ERJ3GEYJ104	1	
R4065	VRE0034E123	1	
R4066	ERJ3GEYJ391	1	
R4067	ERJ3GEYJ331	1	
R4068	ERJ3GEYG222	1	
R4069,70	ERJ3GEYJ103	2	
R4071	ERJ3GEYJ564	1	
R4072	ERJ3GEYG331	1	
R4073	ERJ3GEYJ683	1	
R4074	ERJ3GEYJ334	1	
R4075	ERJ3GEYJ121	1	
R4076	ERJ3GEYJ683	1	
R4077	ERJ3GEYJ152	1	
R4078	ERJ3GEYJ102	1	
R4079	ERJ3GEYJ183	1	
R4080	ERJ3GEYJ513	1	
R4081	ERJ3GEYJ105	1	
R4082	ERJ3GEYJ562	1	
R4083	ERJ3GEYJ332	1	
R4084	ERJ3GEYJ153	1	
R4085	ERJ3GEYJ105	1	
R4086	ERJ3GEYJ562	1	
R4087	ERJ3GEYJ513	1	
R4088	ERJ3GEYJ153	1	
R4089	ERJ3GEYJ332	1	
R4090	ERJ3GEYJ183	1	
R4091	ERJ3GEYJ102	1	
R4092	ERJ3GEYJ152	1	

Ref.No.	Part No.	Pcs	
R4094-00	ERJ3GEYJ103	7	
R4101	ERJ6GEYJ272	1	
R4102	ERJ6GEYJ562	1	
R4103	ERJ6GEYJ183	1	
R4104	ERDS2TJ4R7	1	
R4105	ERJ6GEYJ102	1	
R4106	ERJ6GEYJ105	1	
R4107	ERJ6GEYJ333	1	
R4108	ERJ6GEYJ472	1	
R4109	ERJ6GEYJ561	1	
R4110	ERJ6GEYJ103	1	
R4111	ERJ6GEYJ102	1	
R4112	ERJ6GEYJ333	1	
R4113	ERJ6GEYJ103	1	
R4114	ERJ6GEYJ472	1	
R4115	ERJ6GEYJ561	1	
R4116	ERJ6GEYJ105	1	
R4117-20	ERJ6GEYJ332	4	
R4121	ERJ6GEYJ222	1	
R4122	ERJ6GEY0R00	1	
R4124	ERJ6GEYJ222	1	
R4125	ERJ6GEY0R00	1	
R4127,28	ERJ6GEYJ222	2	
R4130-34	ERJ3GEYJ103	5	
R4135	ERJ3GEYJ392	1	
R4136	ERJ3GEYJ472	1	
R4137	ERJ3GEYJ392	1	
R4138	ERJ3GEYJ472	1	
R4139,40	ERJ3GEYJ102	2	
R4141,42	ERJ3GEYJ104	2	
R4501	ERJ3GEYG512	1	
R4502	ERJ3GEYJ104	1	
R4503	ERJ3GEYJ103	1	
R4504	ERJ3GEYG512	1	
R4505-07	ERJ3GEYJ103	3	
R4509	ERJ3GEYJ104	1	
R4510	ERJ3GEYJ822	1	
R4511,12	ERJ3GEYJ562	2	
R4513	ERJ3GEYJ822	1	
R4514	ERJ3GEYJ332	1	
R4515	ERJ3GEYJ104	1	
R4516	ERJ3GEYJ563	1	
R4517	ERJ3GEYJ104	1	
R4518	ERJ3GEYJ103	1	
R4519,20	ERJ3GEYJ682	2	
R4521	ERJ3GEYJ822	1	
R4522	ERJ3GEYJ222	1	
R4523	ERJ3GEYJ333	1	
R4524,25	ERJ3GEYJ103	2	
R4526	ERJ3GEYJ681	1	
R4527	ERJ3GEYJ102	1	
R4528	ERJ3GEYJ182	1	
R4529,30	ERJ3GEYJ152	2	
R4531	ERJ3GEYJ182	1	
R4532	ERJ3GEYJ821	1	
R4533	ERJ3GEYJ182	1	
R4534	ERJ3GEYJ473	1	
R4535	ERJ3GEYJ223	1	
R4536,37	ERJ3GEYJ562	2	
R4538	ERJ3GEYJ472	1	
R4539	ERJ3GEYJ223	1	
R4540	ERJ3GEYJ103	1	
R4541	ERJ3GEYJ223	1	
R4542	ERJ3GEYJ102	1	
R4543	ERJ3GEYJ330	1	
R4544	ERJ3GEYJ563	1	
R4545	ERJ3GEYJ561	1	
R4546	ERJ3GEYJ103	1	
R4547	ERJ3GEYJ563	1	
R4548	ERJ3GEYJ561	1	
R4549	ERJ3GEYJ103	1	
R4550	ERJ3GEYJ563	1	
R4551	ERJ3GEYJ561	1	
R4552-54	ERJ3GEYJ103	3	
R4555-58	ERJ3GEYJ473	4	

Ref.No.	Part No.	Pcs	
R4559-62	ERJ3GEYJ103	4	
R4563,64	ERJ3GEYJ470	2	
R4565	ERJ3GEY0R00	1	
R4566	ERJ3GEYJ102	1	
R4567	ERJ3GEYJ181	1	
RY4001	VSY2067	1	
T4001	VLT0538	1	
VR401	EVM7JGA30B24	1	
VR402	EVM7JSX30B14	1	
VR403	EVM7JGA30B54	1	
VR405	EVM7JSX30B14	1	
VR406	EVM7JGA30B54	1	
VR407	EVM7JGA30B24	1	
VR4001	EVM7DGA00B24	1	
VR4002	EVM7DGA00B14	1	
VR4003	EVM7DGA00B24	1	
VR4004-06	EVM7DGA00B14	3	
VR4007,08	EVN32CA00B25	2	
VR4501,02	EVM7DGA00B23	2	
VR4503	EVM7DGA00B14	1	
VR4504	EVM7DGA00B24	1	
VR4505,06	EVM7JSX30B53	2	
VR4507	EVM7DGA00B25	1	
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	MOTHER		
P911,12	VJS3324	2	
P931,32	VJS2898A050	2	
P941	VJS2898A050	1	
P962-64	VJP3203A020Z	3	
P972	VJS2889A021	1	
P983	VJS2898A050	1	
P994,95	VJS3490A10	2	
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	FRONT		
C6701,02	ECEA1AKS221	2	
C6703-05	ECEA1HKS220	3	
C6706	ECUM1H101JCN	1	
C6707	ECUM1H102KBN	1	
C6708,09	ECUM1H101JCN	2	
C6710	ECEA1CKS330	1	
C6711	ECUM1H221JCN	1	
C6712	ECEA1CKS330	1	
C6713	ECUM1H101JCN	1	
C6714	ECEA1AKS221	1	
C6715	ECUM1H101JCN	1	
C6716,17	ECUM1H220JCN	2	
C6718-20	ECUM1H101JCN	3	
C6721	ECEA1CKS100	1	
C6722	ECUM1H102KBN	1	
C6723-25	ECEA1CKS470	3	
C6726	ECUM1H103KBN	1	
C6727,28	ECUM1H101JCN	2	
C6730	ECEA1AKS221	1	
D6702	MA4056-M	1	
D6703	MA701A	1	
D6704	MA3300-L	1	
D6705,06	MA153	2	
D6707-10	MA152K	4	
D6711-22	MA151K	12	

Ref.No.	Part No.	Pcs	
D6724	MA151K	1	
D6727-35	MA151K	9	
D6738	MA701A	1	
D6739,40	MA151K	2	
D6741	MA153	1	
DP6701	VSL0313	1	
FL6701	VLF0523	1	
IC6701	UPD75236J180	1	
IC6702	MN1382-R	1	
IC6703	MN1382-U	1	
IC6704	UPC393G2	1	
IC6705	UPD6253GS	1	
IC6706	MC74HC4053F	1	
IC6707	NJM2068MD	1	
J6706	VJJ0379	1	
J6707	VJJ0380	1	
L6701	VLQEL05K121J	1	
L6702,03	VLQEL05K101J	2	
LD6701-04	LN440YCPU	4	
LD6705	LN41YCPHL	1	
LD6706,07	LN440YCPU	2	
LD6709	LN41YCPHL	1	
LD6710,11	LN340GCP	2	
P6701	VJS2889A021	1	
P6702	VJP3076	1	
Q6701	2SB709A	1	
Q6702	MSD602-R	1	
Q6703-06	MSB710-R	4	
Q6707-10	MSD601-R	4	
Q6711	MSD602-R	1	
R6701	ERJ14YJ152	1	
R6702	ERJ6GEYJ104	1	
R6703	ERJ6GEYJ472	1	
R6704	ERJ6GEYJ102	1	
R6705	ERJ6GEYJ563	1	
R6706	ERJ6GEYJ681	1	
R6707,08	ERJ6GEYJ683	2	
R6709	ERJ6GEYJ563	1	
R6710,11	ERJ6GEYJ103	2	
R6712-16	ERJ6GEYJ223	5	
R6717	ERJ6GEYJ471	1	
R6718-29	ERJ6GEYJ103	12	
R6730-33	ERJ6GEYJ223	4	
R6734,35	ERJ6GEYJ103	2	
R6736	ERJ6GEYJ392	1	
R6737-49	ERJ6GEYJ473	13	
R6750	ERJ6GEYJ102	1	
R6752-59	ERJ6GEYJ473	8	
R6760-67	ERJ6GEYJ103	8	
R6768-71	ERJ6GEYJ223	4	
R6772,73	ERJ6GEYJ511	2	
R6776-82	ERJ14YJ470H	7	
R6784-86	ERJ14YJ470H	3	
R6787	ERJ6GEYJ104	1	
R6788	ERJ6GEYJ332	1	
R6789	ERJ6GEYJ104	1	
R6790	ERJ6GEYJ332	1	
R6791	ERJ6GEYJ104	1	
R6792	ERJ6GEYJ332	1	
R6793	ERJ6GEYJ104	1	
R6794-98	ERJ6GEYJ332	5	
R6799	ERJ6GEYJ104	1	
R6800	ERJ6GEYJ332	1	
R6801,02	ERJ6GEYJ224	2	
R6803	ERJ6GEYJ391	1	
R6804	ERJ6GEYJ124	1	

Ref.No.	Part No.	Pcs	
R6805	ERJ6GEYJ753	1	
R6806	ERJ6GEY0R00	1	
R6807	ERJ6GEYJ330	1	
R6809	ERJ6GEYJ182	1	
R6810-12	ERJ6GEYJ473	3	
R6813	ERJ6GEYJ103	1	
R6814	ERJ6GEYJ2R2	1	
SW6701-12	EVQQSB04B	12	
SW6714	EVQQSB04B	1	
SW6716,17	VSS0395	2	
SW6718,19	EVQQSB04B	2	
SW6720	VSS0220	1	
SW6721-23	VSS0395	3	
VR6701,02	EVUF3AF15B24	2	
VR6703	EVJYB0F15C23	1	
X6701	VSX0140	1	
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	REEL DRIVE		
C2701	ECQB1H103JF	1	
C2702	ECEA1EKA470	1	
C2703	ECEA0JKA470	1	
C2704	ECUM1H333KBN	1	
C2705	ECQV1H564JZ	1	
C2706-08	ECEA1HKA2R2	3	
C2709-12	ECUM1H333KBN	4	
C2713	ECEA0JKA470	1	
C2714	ECEA0JKA101	1	
C2715-17	ECEA0JKA470	3	
C2718	ECQB1H103JF	1	
C2719	ECEA1EKA470	1	
C2720	ECEA0JKA470	1	
C2721	ECUM1H333KBN	1	
C2722	ECQV1H564JZ	1	
C2723-25	ECEA1HKA2R2	3	
C2726-29	ECUM1H333KBN	4	
D2701	MA151K	1	
D2702	MA151WK	1	
D2703	MA151K	1	
D2704	MA153	1	
D2705	MA151K	1	
D2706	MA151WK	1	
D2707	MA151K	1	
D2708	MA153	1	
IC2701,02	XRA6435S	2	
IC2703	LM358PS	1	
IC2704	MC14053BF	1	
IC2705	LM339NS	1	
IC2706	LM358PS	1	
J2701	ERJ6GEY0R00	1	
L2701-04	VLQ0460	4	
P2701	VJS3135	1	
P2702	VJS2149W	1	
P2703	VJS3202B008	1	
P2704,05	VJS1412	2	
Q2701	MSD601-R	1	
QR2701	MRN1404	1	
R2701	ERJ6GEYG102	1	
R2702,03	ERJ6GEYJ103	2	
R2704	ERJ6GEYJ223	1	
R2705	ERJ6GEYJ123	1	
R2706	ERJ6GEYJ223	1	
R2707,08	ERJ6GEYJ103	2	
R2709	ERJ6GEYJ105	1	
R2710	ERJ6GEYJ182	1	
R2711	ERJ6GEYJ103	1	
R2712	ERJ6GEYJ102	1	
R2713,14	ERDS2TJ330	2	
R2715	ERX12SJ1R0	1	
R2716	ERDS2TJ330	1	
R2717	ERJ6GEYJ101	1	
R2718	ERJ6GEYJ272	1	
R2719	ERJ6GEYJ822	1	
R2720	ERJ6GEYJ221	1	
R2721	ERJ6GEYJ102	1	
R2722,23	ERJ6GEYJ222	2	
R2724	ERJ6GEYJ224	1	
R2725,26	ERJ6GEYJ102	2	
R2727	ERJ6GEYJ681	1	
R2728	ERJ6GEYJ823	1	
R2729,30	ERJ6GEYJ103	2	
R2731	ERJ6GEYJ122	1	
R2732	ERJ6GEYJ103	1	
R2733	ERJ6GEYJ102	1	
R2734,35	ERDS2TJ330	2	
R2736	ERX12SJR47	1	
R2737	ERDS2TJ330	1	
R2738	ERJ6GEYJ102	1	
R2739	ERJ6GEYJ221	1	
R2740	ERJ6GEYJ224	1	
R2741,42	ERJ6GEYJ102	2	
R2743	ERJ6GEYJ223	1	
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	HEAD AMP		
C5001	ECUM1H102KBN	1	
C5002,03	ECUM1H103ZFN	2	
C5004	ECEA1HKA010	1	
C5005	ECUM1H102KBN	1	
C5006-08	ECUM1H103ZFN	3	
C5009	ECUM1H182JN	1	
C5010	ECUM1E104ZFN	1	
C5011	ECEA1CKA220	1	
C5012	ECUM1H473ZFN	1	
C5013	ECUM1H102KBN	1	
C5014	ECEA0JKA470	1	
C5015	ECUM1E104ZFN	1	
C5016	ECEA1EKA4R7	1	
C5017	ECUM1H080DCN	1	
C5018,19	ECUM1C224ZFN	2	
C5020	ECEA1EKA4R7	1	
C5021	ECUM1H080DCN	1	
C5022	ECEA1EKA4R7	1	
C5023	ECUM1H020DCN	1	
C5024,25	ECUM1E104ZFN	2	
C5026	ECUM1H020DCN	1	
C5027	ECEA1EKA4R7	1	
C5028	ECUM1E104ZFN	1	
C5029	ECUM1H102KBN	1	
C5030	ECUM1H103ZFN	1	
C5031	ECUM1H104ZFN	1	
C5032,33	ECUM1E104ZFN	2	
C5034	ECUM1H102KBN	1	
C5035	ECEA0JKA470	1	
C5036	ECUM1H103ZFN	1	
C5037,38	ECUM1H103KBN	2	
C5039,40	ECUM1H103ZFN	2	
C5042	ECEA1HKA010	1	
C5043	ECUM1H471JCN	1	
C5044,45	ECUM1H101JCN	2	
C5046	ECUM1H471JCN	1	
C5047	ECEA1HKA010	1	
C5048	ECUM1H472ZFN	1	
C5056,57	ECUM1H103ZFN	2	
C5058	VCYE1C104MR1	1	
C5059	ECUM1H680JCN	1	
C5060	ECUM1H220JCN	1	
C5061	ECUM1H680JCN	1	
C5062	ECUM1H103ZFN	1	
C5063	ECUM1H680JCN	1	
C5066	ECUM1C224ZFN	1	
D5001,02	MA151K	2	
D5004	MA151K	1	
IC5001	AN3334K	1	
IC5002	BA7740FS	1	
IC5003	AN3370K	1	
L5001-04	VLQ0460	4	
L5007	VLQ0460	1	
L5008	VLQ0188J5R6	1	
P5001	VJP3091	1	
P5002	VJS2603	1	
P5003	VJP3091	1	
Q5001	MSB709-R	1	
Q5002	MSC2295-B	1	
Q5003	XN4504	1	
Q5004,05	MSC2295-B	2	
QR5001	MRN1404	1	
R5001	ERJ6GEYJ472	1	
R5003	ERJ6GEY0R00	1	
R5004	ERJ6GEYJ101	1	
R5005	ERJ6GEYJ102	1	
R5006	ERJ6GEYJ152	1	
R5007	ERJ6GEYJ122	1	
R5008	ERJ6GEYJ222	1	
R5009	ERJ6GEYJ471	1	
R5010	ERJ6GEYK1R0	1	
R5011-14	ERJ6GEYJ182	4	
R5015-18	ERJ6GEYJ100	4	
R5019	ERJ6GEYJ391	1	
R5020,21	ERJ6GEYJ332	2	
R5022	ERJ6GEYJ152	1	
R5026	ERJ6GEY0R00	1	
R5027	ERJ6GEYJ333	1	
R5028	ERJ6GEYG243	1	
R5029	ERJ6GEYG273	1	
R5030	ERJ6GEYJ391	1	
R5031	ERJ6GEYJ103	1	
R5032	ERJ6GEYJ473	1	
R5033	ERJ6GEYJ273	1	
R5034	ERJ6GEYJ153	1	
R5036	ERJ6GEYJ332	1	
R5037,38	ERJ6GEYJ152	2	
R5039	ERJ6GEYJ332	1	
R5040	ERDS2TJ151	1	
R5041	ERJ6GEYJ180	1	
R5042,43	ERJ6GEYJ100	2	
R5044,45	ERJ6GEYJ103	2	
R5046,47	ERJ6GEY0R00	2	
R5056	VRE0034E182	1	
R5057	VRE0034E332	1	
R5058	ERJ6GEY0R00	1	
R5059	ERJ6GEYJ473	1	
R5070	ERDS2TJ472	1	
VR5001,02	EVN32CA00B23	2	
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	REAR JACK		
J6901	VJS3155	1	
J6902	VJS3154	1	
J6903	VJS3155	1	
J6904	VJS3154	1	
J6906,07	VJJ0323	2	
J6908	VJJ0322	1	
J6909	VJJ0169	1	
P6901,02	VJP3490B10	2	
R6901-03	EROS2CKF75R0	3	
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	TENTION SENSOR		
Q1504	ON1301	1	
R1502	ERDS2TJ102	1	
=========	[VEK6042]		
	MOTOR BASE		
	VJP1229T	1	
	VJP1229G	1	
	VJP3106B013	1	
	VJS1493	1	
=========	[VEK4058]		
	PHOTO TR. (L)		
C1502	ECKF1H102KB	1	
P1508	VJS2165W	1	
Q1502	PN150NVS	1	
R1503	ERDS2TJ222	1	
=========	[VEK4676]		
	PHOTO TR. (R)		
C1502	ECKF1H102KB	1	
P1508	VJS2165W	1	
Q1502	PN150NVS	1	
R1503	ERDS2TJ222A	1	

Service Manual

Supplement

NTSC/PAL Video Product

Subject : Countermeasure for Auto Repeat Playback

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-MD830P V23F93	24	VSD9403M246	F7—
AG-MD830E	19	VSD9408M637	F7—

Board: VIDEO 2

Symptom : Playback function may be stopped in the auto repeat mode.

Cause : The "No Video Detection Circuit" may operate correctly due to the temperature charastaric of the AFC circuit on the "No Video Detection Circuit" .

Remedy : In order to prevent this symptom, the type of capacitor (C3318) has been changed.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
C3318	ECUV1H392KBN	ECQB1H392JF	C. CAPACITOR 50V 3900P	1	C	

TE2-4916

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Service Manual

Supplement

NTSC / PAL Video Product

Subject :Change of Bias Transformer

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-6840H-P	49	VRD8909M237	F7——
AG-6850H-P	47	VRD9001M243	F7——
AG-6842HP	11	VSD9302M230	F7——
AG-MD830P [illegible]	23	VSD9403M246	F7——
AG-7350-P	63	VSD9106M207	F7——
AG-6840H-E/B	36	VSD9004M602	F7——
AG-6850H-E/B	36	VSD9006M603	F7——
AG-MD830E	18	VSD9408M637	F7——
AG-7350-E/B	54	VSD9109M615	F7——

Circuit: AUDIO

Reason for Change

- ☐ The following part(s) has(have) been changed for serviceability improvement.
- ☐ The following part(s) has(have) been changed for productivity improvement.
- ☐ The following part(s) has(have) been changed for standardization.
- ☐ The following part(s) has (have) been changed for the safety regulation.
- ■ The following part(s) has (have) been changed for durability improvement.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
T4001	VLT0538B	VLT0538C	TRANSFORMER	1	C	

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